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MANAGED CARE IN THE MILITARY: THE CATCHMENT AREA MANAGEMENT DEMONSTRATIONS

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PREFACE

Over the last two years, the Army, Navy, and Air Force have been testing a new approach to delivering health care known as Catchment Area Management (CAM). With its emphasis on managed care and decentralized decisionmaking, CAM could serve as a model for future reforms. This paper, prepared at the request of the Subcommittee on Military Personnel and Compensation of the House Committee on Armed Services, describes the various Catchment Area Management demonstrations and presents preliminary findings on their accomplishments. In keeping with the mandate of the Congressional Budget Office to provide nonpartisan analysis, the paper contains no recommendations.

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SUMMARY

Since 1989, the Department of Defense (DoD) has been testing several new approaches to providing health care to its nonactive-duty beneficiaries, who include dependents of active-duty personnel and retired military personnel and their dependents. One of these new approaches is Catchment Area Management. "Catchment Area" refers to the roughly 40-mile radius around a military hospital; "Management" refers to a fundamental change in the function of local commanders that is expected to contain health care costs.

Under current policy, each catchment area's medical commander is responsible for the delivery of care inside the local military hospital. That responsibility ends when nonactive-duty beneficiaries seek care in the civilian sector, with financial help from the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). (CHAMPUS is a conventional insurance program that permits beneficiaries to seek treatment by civilian physicians of their choice and pays most of the bill.) Medical commanders have little say as to when, where, or how often nonactive-duty beneficiaries receive civilian outpatient care paid for by CHAMPUS.

Catchment Area Management changes all of this. The local medical commander becomes responsible for managing the provision of all health care services, civilian as well as military, to an enrolled population of military beneficiaries.

To improve its health care system, DoD has proposed a program of "Coordinated Care," which appears to be modeled along the lines of Catchment Area Management. Therefore, it is important to know how, and how well, Catchment Area Management has worked.

This paper looks at the five Catchment Area Management (CAM) demonstrations in progress around the country. These sites reasonably represent the military health care system as a whole, varying considerably in the sizes of their military hospitals, the numbers and types of beneficiaries, and the availability of civilian health care (see Summary Table 1).

SUMMARY TABLE 1. CHARACTERISTICS OF CATCHMENT AREA MANAGEMENT SITES

Feature	Luke and Williams AFBs, Phoenix	Naval Base, Charleston	Bergstrom AFB, Austin	Ft. Carson, Colorado Springs	Ft. Sill, Lawton, Oklahoma
		Military Population[a]			
Total Beneficiaries	75,400	103,800	41,700	122,300	55,700
Retired Military and Their Dependents as Percentage of All Beneficiaries	64	29	64	36	29
Military beneficiaries as Percentage of Total Population[b]	4	20	5	22	24
		Military Hospital			
Operating Beds	55 & 15	184	30	108	118
Percentile[c]	80 & 10	99	50	65	75
		Nonmilitary Care			
Practicing Civilian Physicians[d]	160	157	142	133	65
Civilian Hospital Beds[d]	339	359	278	340	298
Veterans' Hospitals	1	1	0	0	0

SOURCE: Congressional Budget Office.

NOTE: AFB = Air Force Base.

a. From counts of population at the end of fiscal year 1990 from the Defense Enrollment and Eligibility Reporting System.
b. The most recently available data on total area populations were from 1988.
c. Calculated relative to other hospitals with the same service affiliation.
d. Physicians per 100,000 people, including military beneficiaries.

It is too soon to judge the effectiveness of Catchment Area Management because the oldest demonstration started less than two years ago. However, this paper describes what the CAMs have accomplished to date and provides information concerning their effectiveness.

CAN MILITARY COMMANDERS CREATE CIVILIAN NETWORKS?

Military treatment facilities cannot accommodate every military beneficiary who wants health care. For this reason, the CAM groups have had to augment military medical capabilities with the services of civilian health care providers. Defying the skeptics, local medical commanders managed to set

up a variety of arrangements with civilian providers, though the process was often time-consuming.

Where military treatment facilities had the space and equipment to provide a certain service, but not the necessary staff, local commanders used DoD's "Partnership Program" to recruit civilian physicians directly. Partnership physicians receive fee-for-service payments from CHAMPUS for working inside the military treatment facility. Ft. Carson in Colorado Springs and Bergstrom Air Force Base in Austin made especially extensive use of partnership providers to expand their inpatient capabilities.

Where military treatment facilities simply could not provide care directly, local medical commanders did it through networks of selected civilian physicians, similar to the preferred provider organizations that have spread throughout the civilian sector. In Phoenix, Austin, and Colorado Springs, the CAM managers piggybacked on privately formed physician networks. By contrast, Ft. Sill and Charleston patched together their own networks, which include one-quarter to one-third of the areas' practicing physicians. Several sites also made arrangements with civilian hospitals and ancillary health care providers.

DO COMMANDERS HAVE ENOUGH CONTROL?

Extended local control over the spending of CHAMPUS funds is a key feature of Catchment Area Management. When shortages of military staff, for instance, force nonactive-duty beneficiaries out of the military treatment facility and into CHAMPUS, the government ends up paying not only for the military's missing resources but also for the resources that are available. Under CAM, local medical commanders should have the flexibility to spend CHAMPUS funds to replace the missing military resources and so save DoD money.

At least, that was the idea. But the CAM demonstrations have not always provided that flexibility. During the demonstrations' first year, the Navy and the Air Force kept use of CHAMPUS funds by CAM sites under central control; the Air Force has recently begun making changes that give local commanders more control. The Army gave its local commanders, from the start, relatively wide authority to spend CHAMPUS funds on CAM-related projects. None of the services, however, allow local commanders to keep any of the savings from their managerial initiatives.

WILL BENEFICIARIES ENROLL?

Under current law, military beneficiaries have wide latitude in choosing a health care provider. To steer beneficiaries to cost-effective providers, each CAM site has a program of enrollment. Generally, beneficiaries who are eligible for CHAMPUS are encouraged to enroll by the promise of reduced CHAMPUS copayments. They are also threatened with reduced access to direct military care if they do not enroll. Individual CAMs, however, vary widely in their approaches to enrollment.

Three of the CAM programs--Phoenix, Austin, and Ft. Sill--tried to enroll as many eligible beneficiaries as possible. They assigned enrollees to "gatekeepers"--primary care providers who control referrals to network specialists--and prohibited enrollees from straying out of the network. In exchange for giving up some freedom of choice, enrollees received substantial reductions in CHAMPUS cost-sharing and implicit priority over nonenrollees for care in military treatment facilities. Ft. Carson took a more selective approach to enrollment, targeting those beneficiaries who had previously used CHAMPUS. One advantage of Ft. Carson's targeted approach is that it limits the risk of enrolling beneficiaries who had not previously used the military health care system. The trade-off is less improvement in the local commander's ability to plan and budget for a defined population.

Experience so far suggests that beneficiaries will give up some free choice of health care providers and enroll in a program. More than 40 percent of eligible beneficiaries in Ft. Sill, and somewhat less than 20 percent in Phoenix and Austin, have enrolled. However, it is too early to know which of the many approaches tried by the CAM demonstrations is most successful.

CAN CAMS SAVE MONEY?

Administrators of the CAM demonstrations have tried to save money in two ways: by negotiating discounts with civilian providers, and by making greater use of military treatment facilities. They generally paid less attention to controlling the overall use of services.

Negotiating Discounts

In negotiations with private physicians, local medical commanders sought discounts against prevailing CHAMPUS charges. Across a wide spectrum of specialties, discounts generally ranged between 10 percent and 30 percent. However, because prevailing charges may be lower than actual billed charges,

it is possible that the percentage discounts overstate savings. Only the Navy had a data system in place (the so-called CAMCHIS system) that enabled administrators to review physicians' actual charges before setting a discount.

In selecting civilian providers, the services paid more attention to credentials and geographic location than to patterns of practice. They thus missed an opportunity to save money by directing beneficiaries to cost-effective providers. The services are trying to set up systems for monitoring physicians--based on retrospective review of claims for outpatient care--but they are uncertain about how to use any negative information.

Greater Use of Military Facilities

The incremental cost of treating beneficiaries in military facilities is generally thought to be less than the average cost of paying for their civilian care under CHAMPUS. Thus, all the CAM commanders have sought greater use of military facilities. All have done so by hiring civilian physicians to work at military facilities under the partnership program. Moreover, three of the five CAM sites have required that primary care physicians always refer patients to military rather than civilian specialists (and a fourth is considering doing so).

Commanders of the two longest-running CAM demonstrations, Ft. Carson and Ft. Sill, have evidently succeeded in increasing use of military facilities. Between 1989 and 1990, while outpatient visits to military facilities by nonactive-duty beneficiaries fell in most Army facilities by 4 percent, such visits rose 6 percent at Ft. Sill and 23 percent at Ft. Carson. In addition, Ft. Carson succeeded in boosting nonactive-duty admissions to the Army's hospital by 29 percent.

Increases in admissions to military hospitals--particularly for obstetrical care--are likely to save money because a decrease in hospital admissions paid for by CHAMPUS helps to offset each admission. Perhaps because it boosted admissions to its military hospital, Ft. Carson held the increase in its total costs--that is, costs of direct care facilities as well as CHAMPUS--to a modest 5 percent between 1989 and 1990.

It is less clear that increases in visits to military outpatient clinics save money because there may not be an equivalent decrease in visits paid for by CHAMPUS. DoD's experience has been that, on average, every additional visit to a military clinic results in reducing only one-half a visit under CHAMPUS. Because beneficiaries pay next to nothing for their care in military clinics, and because their use of medical services comes under very

little review, improved access to military health care may result in increased costs to DoD. Perhaps for this reason, Ft. Sill's total health care costs climbed by about 22 percent between 1989 and 1990, well above the rate of medical inflation.

This situation highlights an important problem for CAMs. Without procedures for managing use in military treatment facilities, the services run a risk of increasing the use of health care as they shift patients from standard CHAMPUS to direct military care. To lessen this risk, the military will need better data on and stricter controls over the use of health care services.

CHAPTER I

INTRODUCTION TO MANAGED CARE IN THE MILITARY

Just as spending on health care has absorbed an ever-increasing proportion of the U.S. gross national product, so has it loomed ever larger in the Department of Defense's budget. DoD runs one of the nation's largest systems of health care. It includes 128 hospitals in the United States, more than 400 separate clinics, and the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), a traditional insurance plan that permits beneficiaries to be treated by civilian physicians of their choice and pays most of the bill. In 1984, 2.8 percent of the defense budget--$7.2 billion--was spent to run this health care system. Six years later, the proportion of the defense budget allocated to health care had risen to at least 4.8 percent, a total of $14.1 billion. CHAMPUS was the fastest growing part of the system, more than doubling from $1.2 billion to $3.1 billion a year (see Table 1).

Nationwide, about 2.5 million dependents of active-duty personnel and 4 million retired personnel and their dependents are eligible to use the military health care system. About 85 percent of the active-duty dependents and 65 percent of the retired military personnel and their dependents live inside "catchment areas," the regions roughly 40 miles around each of the military's hospitals. These beneficiaries are far more likely to use the military treatment facility than their counterparts outside catchment areas. Unlike active-duty personnel, however, nonactive-duty beneficiaries are entitled to care in military treatment facilities only when space is available. When space is not available for inpatient care, beneficiaries must seek permission from their catchment area's medical commander to use CHAMPUS. For outpatient care, however, beneficiaries are entitled to use CHAMPUS without previous approval.

Local medical commanders have a pretty good idea of the number of people in their catchment areas who are eligible for care. But, because beneficiaries do not "enroll" in a locally managed health care "plan," neither those medical commanders nor their superiors in Washington know the true size of the local population actually being served in military treatment

TABLE 1. SPENDING ON MEDICAL CARE IN THE DEFENSE BUDGET (In billions of current dollars)

	1984	1990	Percentage Change
Total Budget Authority[a]	258,150	292,999	13
Health care spending[b]			
CHAMPUS	1,254	3,119	149
Direct	5,934	10,971	85
Total	7,188	14,090	96
Medical Care as a Percentage of Total Budget	2.8	4.8	71

SOURCE: Congressional Budget Office.

a. Includes funds appropriated to the Department of Defense in budget function 051.
b. Costs taken from Department of Defense, *Report on the Cost of Medical Activities* (April 9, 1991). These exclude various indirect support costs, such as some base operations activities, and therefore understate the total cost of medical care.

facilities.[1] Thus, any two military treatment facilities may be treating their catchment area's beneficiaries at per capita rates that differ widely, but if each is handling similar numbers of hospital admissions and outpatient visits, the system will judge them equally. Indeed, local commanders have every incentive to keep the hospital beds of their facilities filled, because annual budgets are based on the quantity of the work load, rather than its appropriateness.

CHAMPUS serves as a safety valve of sorts for military treatment facilities. About 65 percent of CHAMPUS spending goes to inpatient care. The proportion going to outpatient care has been on the increase in recent years. When a military treatment facility cannot provide a particular type of hospital service--if only because of a temporary shortage of selected personnel--its commander will shift the patient in need to CHAMPUS. Local

1. See Charles Phelps, Susan Hosek, and others, *Health Care in the Military: Feasibility and Desirability of a Health Enrollment System* (Santa Monica: RAND Corporation, June 1984), p. 6.

commanders therefore influence the level of CHAMPUS spending for hospital care, but they have no actual control over CHAMPUS funds. Local commanders have much less influence over outpatient care, the fastest growing part of the CHAMPUS budget. Beneficiaries willing to pay a deductible fee and 20 percent or 25 percent coinsurance can usually visit any physician, whenever they want, as many times as they want. The deductible fee was recently increased from $50 a person or $100 a family to $150 a person or $300 a family (except for dependents of enlisted personnel in pay grades below E-5).

THE MANAGED CARE STRATEGY

The combination of shrinking defense budgets and ever-increasing health care prices will only intensify the pressure of health care on the defense budget. DoD's answer to this problem is to increase reliance on "managed care." Broadly defined, managed care is a strategy for controlling the use and quality of health-care services, as well as clinical costs and operational expenses. To accomplish this, managed care interjects financial incentives, penalties, or administrative procedures into the doctor-patient relationship to alter the decisionmaking of physicians and hospitals; to influence when care is given, where it is provided, how much is given, and how long treatment continues.[2] Especially in the last decade, managed care has become a leading force in the health care industry. Most employer-sponsored health care plans use at least some aspect of managed care to control health care costs.

DoD Tests of Managed Care

Since 1988, DoD has put managed care to the test in two projects: the CHAMPUS Reform Initiative (CRI) in California and Hawaii, and the Catchment Area Management (CAM) demonstrations, proceeding in five sites around the country. The centerpiece of CRI is a competitively awarded contract that puts the vendor (Foundation Health Corporation) at some risk for providing services to CHAMPUS beneficiaries in California and Hawaii. To manage that risk, the contractor must channel beneficiaries seeking care to nearby military treatment facilities, or to a select number of physicians and hospitals, organized into a network that agrees to provide services to CHAMPUS beneficiaries at a discount (a preferred provider organization, or PPO). Under the CAM demonstrations, it is up to local military medical

2. See Peter Boland, "Market Overview and Delivery System Dynamics," in Peter Boland, ed., *Making Managed Healthcare Work: A Practical Guide to Strategies and Solutions* (New York: McGraw-Hill, 1991), p. 7.

commanders, not a large contractor, to manage both the military and civilian care of beneficiaries in their "catchment area."

The Coordinated Care Program

Experiences gained through these managed care demonstrations have led to the "Coordinated Care Program," DoD's current plan for revamping the military health care system nationwide.[3] Although DoD has to flesh out the details, Coordinated Care appears to be modeled after Catchment Area Management. As in the CAM demonstrations, the centerpiece of Coordinated Care is the local health care delivery system, based on arrangements between the military and civilian health care providers and managed locally. Chief among Coordinated Care's principles is that each installation's medical commander will be responsible for delivering the lowest-cost, highest-quality health care possible to a population of enrolled beneficiaries. To that end, commanders must have the flexibility to spend funds in the most appropriate manner. Coordinated care enrollees are assured of access to high-quality medical care through military treatment facilities (MTF) or networks of civilian providers, and nonenrollees receive care from civilian providers under CHAMPUS. The enrollment system would be designed to help local medical commanders manage use, and thereby help them plan and budget for a defined population.

If the Congress is to endorse or take part in shaping Coordinated Care, it must know whether these principles are feasible, and how best to achieve them. With their number and variety of experiences, the five Catchment Area Management demonstrations could be valuable in informing the Congress's deliberations. Since these forerunners of Coordinated Care have been operating for a comparatively short time, generally one to two years, it is too soon to draw definitive conclusions about them; indeed, a formal evaluation lies many months away.

Nonetheless, the CAM projects have produced enough information to begin answering these four key questions:

- Have local commanders been able to create the networks of civilian health care providers that are needed to augment military treatment facilities?

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3. Testimony of Enrique Mendez, Assistant Secretary of Defense for Health Affairs, before the Subcommittee on Military Personnel and Compensation of the House Committee on Armed Services (March 13, 1991).

- Will local commanders have enough control over health care funds to carry out their expanded responsibilities?

- Will beneficiaries cooperate by enrolling in a managed care plan, and how many should be enrolled? and

- Can Catchment Area Management reduce costs?

Since it is too early to answer any of these questions definitively, this paper describes the approaches that the CAM projects have taken in pertinent areas. Where possible, the paper also provides preliminary answers, based on experience in the CAM demonstrations. The rest of this chapter provides background on the CAM demonstrations, their sites, and start-up dates.

SETTING THE STAGE

The idea of Catchment Area Management has been around since at least 1985. But the services did not receive statutory authority to demonstrate the concept until 1988. That year's Defense Authorization Act directed the Secretary of Defense to "conduct projects designed to demonstrate [several] alternative health care delivery systems," including a Catchment Area Management demonstration. Each military department was required to carry out at least one such project. The number and location of the sites had to be chosen carefully to make sure that the results of the project would probably represent programs tried nationwide. Finally, the demonstrations were to start during fiscal year 1988, if feasible, and continue for at least two years.

Selecting Demonstration Sites

Potential locales for the CAM demonstrations included the 110 Army, Navy, and Air Force catchment areas located in the United States but outside the CRI states of California and Hawaii, 32 of which overlap extensively to form 12 so-called medical service areas.[4] (Two other such medical service areas are formed in California.) For example, the catchment areas for Ft. Sam Houston and Lackland Air Force Base overlap to form a single medical service area in San Antonio.

4. DoD considers the 40-mile circles around a pair of hospitals to be part of the same service area if at least 25 percent of the population within 40 miles of one facility is also within 40 miles of the other.

The Army selected two sites to demonstrate Catchment Area Management: Ft. Sill in Lawton, Oklahoma, a catchment area considered "medically isolated" because of its remote rural setting, and Ft. Carson in Colorado Springs, Colorado, which forms a medical service area with the nearby Air Force Academy hospital. The Air Force also chose two sites: Bergstrom Air Force Base in Austin, Texas, and the overlapping catchment areas of Luke and Williams Air Force Bases in Phoenix, Arizona (another medical service area). The Navy selected only one site: the Naval Base in Charleston, South Carolina. Together, these five sites--Ft. Sill, Ft. Carson, Phoenix, Bergstrom, and Charleston--constitute about 6 percent of the active-duty personnel and nonactive-duty beneficiaries living inside catchment areas in the United States.

A community hospital, rather than a medical center, serves each of the participating installations. Community hospitals are the most common type of major facility in the military health care system, outnumbering medical centers 6 to 1. But because they operate many fewer beds on average than medical centers--fewer than 100 beds versus the more than 400 beds that medical centers typically operate--community hospitals account for just about half of the military's total available beds. Unlike medical centers, community hospitals are not major teaching centers, nor do they generally treat patients referred from other areas. Community hospitals also tend to devote proportionally more of their resources to outpatient care than do medical centers.

Representativeness of the Sites

As community hospitals go, the Army and Navy selections were atypically large. Based on the number of beds operated in 1988, the year when the services formulated their CAM plans, Ft. Sill was ranked in the seventh-fifth percentile for all Army community hospitals (meaning that 75 percent of Army hospitals were operating fewer beds) and Ft. Carson was in the sixty-fifth percentile. Also noteworthy is the relative newness of each installation's medical facilities. Ft. Carson's hospital was built in 1986, making it at least eight years newer than the typical Army community hospital. Ft. Sill's hospital is fairly old, but it has a large new outpatient facility.

Among Navy hospitals, the Charleston facility was using more beds than any other community hospital. And Charleston is one of the military's few community hospitals that served as a major referral facility.

The Air Force's CAM sites were more representative of that service's comparatively small community hospitals. (The average Air Force community

hospital is only about two-fifths as large as the average Army or Navy community hospital.) Luke Air Force Base, with 55 operating beds, ranked in the eightieth percentile for Air Force community hospitals (and also serves as a referral center); Bergstrom was in the fiftieth percentile; and Williams was in the tenth percentile.

The number of military beneficiaries at the sites vary from about 42,000 active-duty and nonactive-duty people in the Bergstrom catchment area to more than 120,000 in Colorado Springs, a range that spans the sixtieth through ninetieth percentiles (see Table 2). Military beneficiaries are ubiquitous in Charleston, Ft. Sill, and Colorado Springs, where they account for one-fifth or more of the areas' total population. In Phoenix and Austin, however, the military's presence is far less significant, and more typical of other catchment areas. The CAM sites also vary in the composition of beneficiaries. At three of the sites, Charleston, Ft. Carson, and Ft. Sill, retired military personnel and their dependents make up less than 40 percent of the military population. By contrast, retirees and their dependents make up an unusually large proportion--60 percent or more--of the military beneficiaries living in Phoenix and Bergstrom. Moreover, the Air Force installations in Phoenix play host to large numbers of "snowbirds"--retired Northerners who spend the winter in the desert sun--who are not counted in the numbers above. During the winter months, the population of retired military personnel and their dependents living around Luke Air Force Base may well increase by two-fifths.

Conditions in the Local Health Care Market

Conditions in the local health care market, such as the number of physicians available for each 100,000 people and the availability of hospital beds, may have an important bearing on the success of Catchment Area Management. The greater the number of practicing physicians in an area, or the greater the excess of hospital capacity, the more likely a military medical commander may be to strike favorable arrangements with civilian health care providers. In addition, health care conditions that contribute to unnecessary use--such as above-average numbers of physicians or excess hospital capacity--are those under which programs that review the use of medical services have been found to be most effective.[5]

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5. John Wheeler and Thomas Wickizer, "Relating Health Care Market Characteristics to the Effectiveness of Utilization Review Programs," *Inquiry*, vol. 27 (Winter 1990).

TABLE 2. DEPARTMENT OF DEFENSE BENEFICIARIES LIVING IN MILITARY CATCHMENT AREAS

Catchment Areas	Military Beneficiaries				Military Share of Total Catchment Area Population (Percent)
		Percent Distribution			
	Population	Active-Duty	Active-Duty Dependent	Retired Dependent	
Catchment Area Management Sites					
Colorado Springs	122,300	25	39	36	22
Charleston	103,800	28	42	29	20
Phoenix	75,400	11	24	64	4
Lawton, Oklahoma	55,700	29	42	29	24
Austin	41,700	11	25	64	5
Nationwide					
Median[a]	36,800[b]	18	31	50	8[c]
Ninety-fifth Percentile[a]	223,900[d]	27	27	47	38[e]
Fifth Percentile[a]	10,300[f]	31	46	23	2[g]

SOURCE: Congressional Budget Office.

a. These statistical measures are calculated using two different rankings of the military's catchment areas and medical service areas: (1) by the size of the military population and (2) by the military population's share of the total civilian population. Thus, the catchment area that stands at the median in numbers of military beneficiaries is not the same as the catchment area that stands at the median in the military population's share of the total area population.

b. Little Rock Air Force Base, Little Rock, Arkansas, is the median catchment area in population of military beneficiaries.

c. Myrtle Beach Air Force Base, Myrtle Beach, South Carolina, is the median catchment area in the military population's share of the total population.

d. The Philadelphia medical service area, which includes the Army hospitals at Ft. Monmouth and Ft. Dix, New Jersey, and West Point, New York, and the Philadelphia Naval Hospital.

e. Eglin Air Force Base, Fort Walton Beach, Florida.

f. Wurtsmith Air Force Base, Oscoda, Michigan.

g. Homestead Air Force Base, Homestead, Florida.

The health care conditions of the five CAM areas reflect those of other military catchment areas and medical service areas. Table 3 shows how the CAM sites compare with similar catchment areas in their supply of physicians

(office-based and full-time hospital staff) and hospital beds.[6] Phoenix and Charleston enjoy a relative abundance of physicians. Both have more than 155 practicing medical doctors for each 100,000 people, placing them above the seventy-fifth percentile, with particular strength in the various medical and surgical specialties. (However, this number of practicing physicians per capita places them at just about the average for the nation as a whole.) Austin and Colorado Springs generally rank lower, although the Austin area does have strong concentrations of primary care providers, obstetricians, and psychiatrists. And Lawton, Oklahoma, has a relative scarcity of physicians' services in all clinical areas, with the exception of psychiatry.

None of the CAM sites enjoy an abundance of civilian hospital beds. Colorado Springs, the demonstration area with the greatest number of hospital beds per 100,000 people, ranks just above the national median for all military catchment areas; Phoenix and Charleston do not lie far behind. Austin and Lawton, Oklahoma, stand out because they have a particularly limited supply of civilian hospital beds, with rankings below the thirtieth percentile. However, Austin and Lawton have a relatively high amount of excess capacity in their local hospital systems, with overall occupancy rates near or below 60 percent. Moreover, nearly three-quarters of the hospitals near Ft. Sill and Bergstrom Air Force Base have occupancy rates below 60 percent, and one-third have occupancy rates below 40 percent.

Veterans' hospitals are another potentially valuable resource for the military health care system. There are VA hospitals in about one-half of the military's catchment areas and medical service areas nationwide. Under the provisions of the Veterans Administration (VA)-Department of Defense Health Resources Sharing Law of 1982, military and veterans' hospitals can negotiate special reimbursement rates for sharing medical and ancillary services, as well as staff. In Memphis, Tennessee, for example, the VA medical center provides inpatient care and routine outpatient services to military beneficiaries; the military hospital there provides gynecological services and blood to the VA. There are VA hospitals in only two of the CAM sites--Phoenix and Charleston. The Phoenix hospital is a relatively large VA facility, operating nearly 600 beds, and it has a modest amount of excess inpatient capacity. Charleston's VA hospital is less than half the size, and it operates much closer to full capacity.

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6. Physicians who are residents and fellows were excluded from the comparisons for two reasons. First, a resident or fellow is probably less productive than a full-time-equivalent physician, but how much less is highly uncertain. Second, any system of managed care is unlikely to contract with physicians in training.

Limits on Representativeness of Results

Although the five sites offer a diversity of characteristics, the absence of a medical center somewhat limits the representative nature of the study's results. Unlike community hospitals, medical centers run extensive programs of graduate medical education, which are responsible for preparing the next generation of military physicians. The question of whether or not this mission would conflict with managed care's drive to contain costs remains unanswered. Second, medical centers serve as referral facilities for community hospitals in their region, and therefore a large part of their patient load originates outside their catchment areas.

The phenomenon of overlapping catchment areas also makes it difficult to generalize from the CAM sites to catchment areas nationwide. The military's 14 medical service areas (sites around the country distinguished by a high degree of overlap among neighboring catchment areas) contain almost one-half of the military beneficiaries living inside catchment areas. Only 3 of these 14 places, one of which is Phoenix, contain hospitals run by the same service. In Phoenix, the two installations maintain their separate command identities and run their own programs, but Luke (the larger base) acts as the executive agent.[7]

Catchment area management of the 11 other overlapping areas will be particularly complex because of the need for extensive interservice coordination--coordination that the CAM demonstrations have not truly put to the test. Even though Ft. Carson forms a medical service area with the Air Force, and thus must coordinate some activities with it, Ft. Carson's CAM demonstration is entirely an Army initiative. The Air Force has been fairly cooperative, but it neither jointly plans nor jointly runs the demonstration.

Timetable

The services found it infeasible to start the CAM demonstrations in 1988. Although two of the services submitted plans for approval in 1988, none got a demonstration up and running until the following year. Ft. Sill and Ft. Carson became the first fully operational sites in the summer and fall of 1989. The Air Force's sites in Phoenix and Austin began operation in April 1990. The Navy made its Charleston demonstration fully operational in September 1990.

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7. Unlike local medical commanders in the Navy and Army, medical commanders in the Air Force report to their respective line commands. Luke AFB is a Tactical Air Command installation, and Williams is a Training Command installation.

TABLE 3. AVAILABILITY OF CIVILIAN HEALTH CARE RESOURCES IN THE CAM SITES

Resource	Phoenix	Charleston	Austin	Colorado Springs	Lawton, Oklahoma
Practicing Physicians[a]					
Number[b]	160	157	142	133	65
Percentile[c]	74	71	55	47	7
Practicing Physicians in Selected Specialties					
Primary care[d]					
Number[b]	48	47	51	41	25
Percentile[c]	58	53	69	29	2
Medical specialties[e]					
Number[b]	21	18	13	16	3
Percentile[c]	86	72	45	57	12
Surgical specialties[f]					
Number[b]	34	35	28	31	14
Percentile[c]	73	76	41	56	9
Psychiatry					
Number[b]	9	11	14	9	4
Percentile[c]	70	78	89	70	33
Obstetrics and gynecology					
Number[b]	11	12	11	8	5
Percentile[c]	74	80	71	28	11
Hospital Beds[g]					
Number	339	359	278	340	298
Percentile	38	46	17	39	24
Hospital Capacity[g]					
Overall occupancy rate	64	69	62	63	54
Proportion of hospitals with occupancy below:					
60 percent	41	33	81	50	71
40 percent	11	0	31	0	29

SOURCE: Congressional Budget Office based on data from the Area Resource File.

NOTE: Numbers of practicing physicians and numbers of hospital beds are based on 1989 data; area populations are based on 1988 data.

a. Covers physicians providing patient care in solo, partnership, group practice or other arrangement, or as full-time hospital staff.

b. Number per 100,000 people living in counties that make up the military catchment area or medical service area.

c. Calculated relative to 94 individual military catchment areas and medical service areas (combinations of overlapping catchment areas).

d. Physicians in general and family practice, general internal medicine, and pediatrics.

e. Physicians in allergy medicine, cardiology, dermatology, gastroenterology, internal medicine subspecialties, pediatric allergy, pediatric cardiology, and pulmonary medicine.

f. Physicians in general and specialized surgery, orthopedics, ophthalmology, otolaryngology, and urology.

g. Based on beds set up and operating in short-term, nonfederal hospitals (except for Indian Health Service Hospitals). Includes general medical and surgical hospitals, and facilities offering specialized services in such areas as orthopedics, children's care, and psychiatry.

CHAPTER II

ARRANGEMENTS WITH CIVILIAN HEALTH CARE PROVIDERS

As large as the military health care system is, it lacks the staff and resources to make sure that all military beneficiaries have access to high-quality, affordable care. Therefore, if Catchment Area Management is to work, local commanders need the authority to enter into arrangements with civilian health care providers to augment the military's medical capability. Before the CAM demonstrations started, there was some doubt that local commanders would be able to make such arrangements. The demonstrations have shown that, given enough time, commanders working in a diversity of settings can do the job.

Local medical commanders have negotiated a number of arrangements. Those between the military and civilian providers take one of two forms:

- Civilian health care providers working in the military treatment facility, brought in under contracts or through special "Partnership Program" agreements; or

- Health care providers organized into an "external" network and agreeing to treat military beneficiaries at a discount.

INTERNAL ARRANGEMENTS

By the time the CAM demonstrations started, the services were already experienced in arranging "Partnership Agreements." Started in 1988, the Partnership Program allows local medical commanders to recruit civilian physicians--individually or through private organizations--to work full- or part-time in military treatment facilities, taking care of beneficiaries eligible for CHAMPUS. The most likely candidates for this program are military hospitals and clinics that have the space and equipment to provide a specific service, but lack the necessary staff.

Partnership physicians agree to bill CHAMPUS on a fee-for-service basis at a negotiated discount from prevailing CHAMPUS charges. Prevailing charges are set state by state and represent the eightieth percentile of billed charges CHAMPUS received in the previous year. Under normal CHAMPUS

rules, the allowed charge for a visit to a physician is the lesser of the physician's billed charge and the prevailing charge for that physician's state. Beneficiaries are spared CHAMPUS's usual cost-sharing requirements, and so pay nothing more for a visit to a partnership physician than to a military physician. In most instances, the military treatment facility provides administrative and ancillary support (sometimes physicians bring their own nurses or administrative staff), and the physician bills CHAMPUS at a predetermined discount from the prevailing rate.[1] Under such a fee-for-service arrangement, physicians have no particular incentive to control the volume of services used.

Competitively bid contracts also play an important role in providing physicians and support staff. In fact, the services sometimes contract out entire clinical departments. For example, physicians working under contract run emergency rooms in three-quarters of the Air Force's community hospitals (as well as in Navy and Army facilities.) At some installations, including Ft. Sill, contractors run acute-care clinics inside the military hospital.

Extensive Users of Partnership Physicians

Although every CAM program uses the Partnership Program to some degree, partnership physicians are particularly prominent in Ft. Carson, Ft. Sill, and Bergstrom Air Force Base.

Ft. Sill. During 1990, the first full year of the CAM operation, Ft. Sill added 29 partnership providers to its staff. (Since some work part time, they represent less than 29 full-time equivalents.) In an unusual twist, only 11 of the partnership providers are local, and the rest have "relocated" from elsewhere in the state. Typically, a firm or hospital in a nearby city such as Oklahoma City or Tulsa will agree to fly in providers to work several days a week. Ft. Sill turns to the out-of-town sources of care only after making every effort to negotiate with local providers in a given specialty. For example, since neither of Lawton's two civilian dermatologists was willing to offer the government a discount, Ft. Sill plans to bring in one outside dermatologist under the Partnership Program.

The issue of ancillary support generally has been a vexing one for the Partnership Program. As use of partnership agreements has grown, military treatment facilities have found that the added providers are overloading such

1. For an evaluation, see Lewin/ICF, *Initial Report on the Cost-Effectiveness of the Partnership Program* (Washington, D.C.: Lewin/ICF, September 8, 1989).

ancillary services as radiology, pharmacy, laboratory, nursing, and patient records.[2] Anticipating that eventuality, Ft. Sill reprogrammed $1.7 million in CHAMPUS funds (under special demonstration authority) to hire additional nursing, lab, pharmacy, and administrative personnel.

Ft. Carson. As part of a strategy to expand its inpatient capacity, Ft. Carson signed agreements with 56 partnership providers (equivalent to 22 full-time equivalents), including a number of obstetricians and surgeons. Like Ft. Sill, Ft. Carson's hospital had a great deal of unused inpatient capacity in 1988, before the start of the CAM demonstration. But unlike Ft. Sill, Ft. Carson's medical commander developed a plan for increasing the hospital's inpatient capacity. His goals included boosting the number of infant deliveries from 65 to 140 a month (thus "recapturing" all deliveries covered by CHAMPUS) and increasing the number of busy operating rooms from three to nine. Partnership providers were essential in achieving these goals. To support the added work load, Ft. Carson also signed contracts for new radiology, pharmacy, and laboratory staff, and is soliciting contracts for added assistants to physicians and nurses.

When setting reimbursement rates, Ft. Carson tries to keep the annual salaries of its partnership providers in line with average salaries in the community. A partnership practitioner whose heavy volume of services is producing an "excessive" annual salary from CHAMPUS will be asked to renegotiate the discount, or perhaps to alter his or her practice of medicine.

Bergstrom AFB. As the catchment area with the least inpatient capacity in the CAM demonstrations, and one that lost several uniformed physicians in 1988, Bergstrom must run an active Partnership Program. If it were not for its 15 part-time partnership providers, Bergstrom's hospital would lack physicians in the specialties of otolaryngology, gynecology, radiology, orthopedic surgery, urology, ophthalmology, dermatology, and plastic surgery. Another eight physicians, three of whom are full-time, augment the military's primary care providers and general surgeons.

Light Users of the Partnership Program

The Partnership Program is less heavily used in Charleston and particularly in Phoenix.

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2. Susan Hosek and others, *Preliminary Results from an Evaluation of the CHAMPUS Reform Initiative* (Santa Monica: RAND Corporation, January 1990), pp. 21-22.

Charleston. Before the CAM project became fully operational, the Navy had used partnership agreements to staff the area's two free standing outpatient clinics with several family-practice physicians. The Navy signed separate agreements--one with the University of South Carolina, the other with Baker Health Services--to provide four full-time-equivalent physicians to each clinic. Under Catchment Area Management, the Navy has begun using the Partnership Program to expand use of the military hospital, though on a more modest scale than in Ft. Carson. The CAM project hired one partnership physician each in the specialties of anesthesiology, internal medicine, pediatrics, and psychiatry (the Navy also hired three psychologists).

Luke AFB. Luke Air Force Base employs only a few partnership physicians in the surgical specialties and only one primary care provider, a pediatrician. In large part, this limited role for the Partnership Program is attributable to local skepticism about its cost-effectiveness. Indeed, this program appears to run counter to the spirit of managed care because it offers no incentives to control the volume of services. Partnership physicians, for instance, might undermine the savings derived from a discount by boosting the volume of visits or ordering excessive diagnostic tests.

EXTERNAL ARRANGEMENTS

Arranging agreements with providers outside the military treatment facility was a new experience for local medical commanders. In a process that took six months to a year, each CAM site succeeded in developing a network of physicians to augment military medical capabilities. To skirt the complexities of the federal acquisition process, local military medical commanders signed memoranda of understanding (MOUs) with preferred providers. As in the Partnership Program, these arrangements do not constitute contractual agreements, but only set guidelines to be followed in billing and managing patients.

Managers of two sites (Ft. Sill and Charleston) essentially built networks from scratch. Ft Sill's network has 64 individual physicians in 16 different specialties (and includes about one-quarter of the physicians practicing in the catchment area); Charleston's includes 279 physicians in solo and group practice (about one-third of the area's practicing physicians). Physicians were initially slow to join, but interest climbed after 70 or so had signed up.

The three other CAM programs saved time and effort by piggybacking on privately created physician networks that were already in place. Ft. Carson negotiated agreements with four such networks. One was put together by a large civilian hospital, another was assembled by a general care health

maintenance organization (HMO), and the final two were organized by specialized HMOs. In Phoenix, Luke and Williams Air Force Bases entered into arrangements with three individual practice associations (these are part-time group practices for physicians on the staff of a hospital, but usually formed as separate legal organizations), which they augmented with 96 individual agreements. Bergstrom negotiated with two large multi-specialty groups of physicians, as well as with a number of individual physicians.

Some of the CAM groups have included hospitals in their networks of civilian providers. To provide mental health care that was not available in the military hospital, Ft. Sill established agreements with five institutions--one general medical care hospital (in which an unusually high 20 percent of the beds are dedicated to psychiatric care), and four specialized psychiatric facilities (two of which offer programs for substance abuse). Because inpatient psychiatric services are in scant supply around Ft. Sill, three of the five institutions lie outside the catchment area. Staying within their catchment areas, but moving beyond psychiatry, the Air Force CAM managers established agreements with hospitals to cover a range of services. Because its hospital is so small, Bergstrom's agreements were particularly extensive; four independent hospital systems joined its network, including three general acute-care hospitals, two psychiatric facilities, and one rehabilitation hospital. The Navy has established agreements with five of the seven civilian hospitals in the Charleston area (the two nonparticipants lie at the outskirts of the catchment area).

A few site managers went beyond physicians and hospitals to include ancillary medical organizations. Suppliers of durable medical equipment, for example, joined the networks established at the Air Force's sites and at the Army's Ft. Sill. The Air Force went still further by striking deals with home health agencies, laboratory groups, and firms that supply magnetic resonance imaging (MRI) services.

Luke has also been working with the local VA hospital--under the provisions of the Veterans Administration (VA)-DoD Health Resources Sharing Law--in a special effort to augment the availability of mental health care. When military beneficiaries are hospitalized in a civilian psychiatric institution, the government generally pays about $400 a day. The VA hospital in Phoenix is willing to make about 30 beds in its psychiatric ward available to military beneficiaries, at a maximum cost of $175 a day. However, the two sides must get over several stumbling blocks before concluding an agreement. One is the VA hospital's uneasiness over treating women in a psychiatric unit that has been catering exclusively to men. Another--and perhaps the more difficult to resolve--is the question of whether military patients in a VA facility will be subject to DoD's standards of use. Will Luke's medical commander,

for instance, be able to cut short a VA hospital stay that seems excessively long?

CHAPTER III

LOCAL CONTROL OVER HEALTH CARE FUNDS

The Department of Defense spent more than $11 billion last year to provide peacetime care to active-duty and nonactive-duty patients.[1] About $4 billion of that amount came from the services' military personnel budgets, to pay the salaries and benefits of active-duty health care providers and support staff working in military treatment facilities. Another $4.1 billion came from the services' budgets for operation and maintenance (O&M), to pay for such things as the salaries and benefits of civilian employees; supplies of x-ray films, food, drugs, and bandages; and utilities.[2] Unlike funds for military personnel, O&M funds are funneled directly (via the service comptrollers) to local medical commanders, who are immediately responsible for the ways in which those funds are spent. The remaining $3.1 billion flowed through the CHAMPUS program, to pay for the health care services of civilian providers.

Military treatment facilities that have the space and equipment to provide a specific type of service, but lack the necessary military or civilian staff, may shift nonactive-duty beneficiaries to the CHAMPUS program. CHAMPUS thus pays not only for the resources missing in the military treatment facility (the staff) but for the resources that are available (space and equipment).[3] If local medical commanders had the flexibility to spend CHAMPUS funds as they now spend funds provided through their facilities' operation and maintenance budgets--to hire civilian staff, buy computer software, or contract out various services--they could, in theory, replace the missing resources and save DoD money.

Catchment Area Management was intended to test that kind of flexibility. But the demonstrations have fallen short of providing it. This

1. This figure does not include expenses related to wartime readiness, education and training, recruitment, procurement, and construction, all of which amount to about $3 billion a year. In addition, medical care requires an untold total in indirect support costs (such as some base operations activities) that are not reflected in the medical budget.

2. Out of these funds, the services also spend about $400 million a year to arrange for civilian care for active-duty patients.

3. Charles Phelps, Susan Hosek, and others, *Health Care in the Military: Feasibility and Desirability of a Health Enrollment System* (Santa Monica: RAND Corporation, June 1984), pp. 68-69.

chapter describes the degree of local control in the various CAM demonstrations.

CONTROL OVER CHAMPUS FUNDS

The Catchment Area Management demonstrations have led to very little change in the Navy's control over CHAMPUS funds, but somewhat more in the Army and Air Force.

Navy

Before Catchment Area Management, control over CHAMPUS funds rested with the Navy's Bureau of Medicine (BUMED) in Washington. It still does. The medical commander of the Charleston catchment area has no direct control over CHAMPUS funds. Instead of shifting funds between CHAMPUS and direct care as needed, a local commander must convince the Bureau of Medicine that a particular increase in the local operation and maintenance budget will lead to lower CHAMPUS costs. So far BUMED has been very supportive, but the process of appealing to Washington for local initiatives seems contrary to the spirit of Catchment Area Management. Moreover, if increased spending on operation and maintenance reduces CHAMPUS costs by an even greater amount, savings revert to the Navy as a whole. (The Navy, however, is studying ways to share some of CHAMPUS savings with local medical commanders.)

Air Force

Like the Navy, the Air Force also kept the CAM sites' CHAMPUS funds under central control, at least during the CAM's first year of operation. At that time, the Tactical Air Command Headquarters would approve release of CHAMPUS funds for CAM-related purposes on a piecemeal basis when local commands could document savings. And as in Charleston, the local commanders lack authority to reinvest CHAMPUS savings, either in enhanced benefits for subscribers or in improved surroundings or support for physicians.

In April, however, the CAM sites received new guidance that moves them closer to the CAM ideal. Every quarter, the Air Force will transfer enough CHAMPUS funds to the CAM sites to cover expected claims (based on historical claims expenses, adjusted for projected changes in population and use). The local commanders can spend those funds for CAM-related

projects without prior approval. As needed, they release funds to CHAMPUS to pay claims processed by the fiscal intermediaries.[4]

Army

The Army's CAM sites have had more flexibility over a longer period than those of the other services. At the beginning of the year, each CAM program has been authorized sufficient CHAMPUS funds to cover payment of claims and CAM overhead. Under the general oversight of the Army's Health Services Command, local commanders have had relatively wide latitude over how to spend those funds. The Army Finance and Accounting Office maintains accountability, making sure that any diverted CHAMPUS funds are spent on initiatives related to the CAM.

Overlapping Catchment Areas

Ft. Carson's experience was complicated by sharing an overlapping catchment area with the Air Force Academy hospital. CHAMPUS funds for Colorado Springs are apportioned between the two services. In 1990, Ft. Carson's CHAMPUS expenditures amounted to about $29 million; the Air Force's, about $11 million. Because the Army has spent money to enroll Air Force beneficiaries (some of whom may be high cost), the Air Force's CHAMPUS bill for 1990 might have been lower than it would have been in the absence of the CAM. However, the Air Force has been reluctant to release its CHAMPUS funds to the Army, even to pay the overhead costs attributable to enrolling Air Force beneficiaries.

Recently, the Air Force has agreed in principle to cede managerial control of CHAMPUS funds to the Army. Also, it would allow the Army to review budgetary plans for the Academy hospital, although the Air Force would retain control over the actual O&M funds. Had such coordination existed earlier, the Ft. Carson CAM might have avoided some inadequate decisions. For example, at the start of the CAM demonstration, Ft. Carson was handling about 65 obstetrical deliveries a month. Another 75 a month were taking place in civilian hospitals, paid for by CHAMPUS. In an effort to recapture all of that CHAMPUS care, Ft. Carson's medical commander

4. Once released, these funds lose their designation as "CAM funds," which raises a concern: what happens if CHAMPUS runs out of money nationwide to pay claims at year's end, as happened in 1989 when CHAMPUS carried over $100 million in claims costs to 1990? Will the CAM installations take their losses proportionally to all other installations?

spent time and money on expanding its hospital's capacity to handle 140 deliveries a month. During 1990, however, the Air Force independently expanded its in-house capacity to deliver obstetrical care, thereby recapturing some deliveries and confounding the Army's goal of 140. The Army hospital now handles about 112 deliveries a month.

PROCESSING CHAMPUS CLAIMS

CHAMPUS contracts out claims processing to several fiscal intermediaries (FI), generally large insurance companies with extensive expertise in paying claims. Even if the medical commander controls CHAMPUS funds, a fiscal intermediary still pays the bills. The ability of these intermediaries to pay promptly is a key factor in getting physicians to join a network and negotiate discounted rates (and perhaps to abide by utilization review). Delays are a particular problem for partnership physicians who rely on CHAMPUS payments for all or a large part of their income. Indeed, problems in claims processing nearly turned out to be the CAM's Achilles' heel in several sites.

The Navy has had no apparent problems in processing claims, perhaps because it worked very closely with the FI for its region in setting up the demonstration. By contrast, the Army and Air Force managers experienced various degrees of distress. Ft. Sill's problems were particularly severe, because the FI contract for its region had recently changed hands, and the new contractor faced transition problems. Delays in processing claims threatened to end several partnership agreements. As a result, the Army Surgeon General granted Ft. Sill unique authority to pay claims for partnership providers on its own, thus bypassing the FI entirely. For accounting purposes at Ft. Sill, CHAMPUS funds are deposited into one of the facility's O&M accounts, from which they are withdrawn periodically to pay partnership physicians. Unlike an FI, which usually reimburses physicians case by case, Ft. Sill can accumulate bills and pay physicians monthly. Still, the administrative burden of paying claims has been considerable, and this unique authority may lapse at the end of this fiscal year.

Ft. Sill also adopted a unique system under which network physicians send bills not to the FI but to the military treatment facility. Ft. Sill personnel then "preprocess" the paperwork and submit claims to the CHAMPUS FI for eventual settlement. This procedure, with its requirements for more personnel and computer software, adds its own administrative burden to Catchment Area Management. It is in line, however, with trends in the civilian sector: more and more preferred provider organizations are preprocessing claims rather than handling them in the customary manner.

Preprocessing gives the civilian plans up-to-date information on use and therefore greater control over their network physicians.[5]

From the start of the CAM demonstrations, the Air Force was philosophically opposed to having a regional FI process claims for a local demonstration. It argued that Catchment Area Management, as a locally based approach to delivering health care, should be local from episode of care all the way through to payment of claims. The Air Force held that since FIs have regional responsibilities, they cannot always be responsive to local areas. Moreover, it contended, because FI contracts set performance standards (that is, a certain percentage of claims must be processed within so many days) for the region as a whole, an FI could perform well overall but poorly in a specific catchment area.

For these reasons, the Air Force wanted to contract with a separate third-party payer to process claims. Rebuffed on this count by the Assistant Secretary of Defense for Health Affairs, the Air Force modified the existing FI contracts to support changes in the structure of benefits and the "gatekeeper" system. Network physicians are encouraged to submit claims promptly if they want quick payment. There were some early problems. In Austin, for example, the FI had trouble paying claims for the one network that offered different discounts for different specialties. But despite these growing pains, the process now seems fairly steady.

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5. Marcum Merz, "Business Start-up Requirements and Operational Issues," in Dorothy Cobbs, ed., *Preferred Provider Organizations: Strategies for Sponsors and Network Providers* (Chicago: American Hospital Association, 1989), p. 37.

CHAPTER IV

ENROLLING MILITARY BENEFICIARIES

Once local medical commanders have made final arrangements with civilian providers, they are ready to channel patients to military or selected civilian providers. Under current law, however, military beneficiaries have wide latitude over their choice of providers. Whenever they need care, they can visit a military physician (assuming that space is available) or make an appointment with any civilian physician. The challenge for managed care is to channel beneficiaries in the most economical direction, either to a military treatment facility or to a selected civilian provider.

To this end, each CAM site has tried "enrolling" CHAMPUS members in a program designed to direct beneficiaries to economical forms of health care. The CAM sites have experimented with a variety of enrollment programs. Some sites provided several inducements aimed at enrolling a large number of beneficiaries, while others provided fewer inducements.

Experience so far suggests that beneficiaries will give up some freedom to choose health care providers and enroll in a program. It is too early to know, though, which of the many approaches tried by the CAM demonstrations is most successful. However, the approaches illustrate an important trade-off that the military will face as it designs a nationwide program of managed care. A program of extensive enrollment would permit channeling of many beneficiaries to efficient health care providers, which could reduce costs. But such a program could also increase costs if beneficiaries who had not previously used the military health care system decided to enroll. The Administration and the Congress should monitor the CAM projects closely to determine which approach offers the best compromise for military beneficiaries and cost containment.

RESTRICTIVE ENROLLMENT THAT IS WIDE IN SCOPE

Three of the CAM programs--Phoenix, Austin, and Ft. Sill--favor a restrictive approach to enrollment. In those areas, beneficiaries who enroll in a special program of managed care must receive their care from the military or from a network provider. If enrollees go outside the network for health care, they pay the entire bill. (The network becomes what is known in the civilian sector

as an exclusive provider organization.) Exceptions are made in only two instances: emergencies, and visits to physicians outside the catchment area. Because CAM's authority extends for demonstration only to the boundaries of the catchment area, an enrollee who visits a physician outside the catchment area--whether the cause is an emergency or not--will be covered by standard CHAMPUS. So far, it appears that few beneficiaries have abused this potential loophole.

Under the Phoenix, Austin, and Ft. Sill CAM programs, members may enroll at any time during the year; there is no open season. If they are unhappy with the arrangements, Army beneficiaries may drop out at any time. Air Force beneficiaries can quit after one year of enrollment. To prevent beneficiaries from gaming the system--enrolling for one episode of care, dropping out for another, then enrolling again--the Air Force requires that members who have dropped out must wait six months before reenrolling. Ft. Sill has no formal requirement, but inhibits such gambits by requiring a request in writing from any beneficiary who wants to leave the program.

Most people in these sites who were eligible for CHAMPUS were encouraged to sign up, thus making the enrollment wide in scope. (The CAM site in Phoenix uniquely requires that beneficiaries have a permanent residence within the catchment area for at least nine months out of a calendar year to be eligible for enrollment, thus barring many "snowbirds" from participating.) Ft. Sill's medical commander set a somewhat arbitrary goal for enrollment equivalent to 65 percent of beneficiaries eligible for CHAMPUS. The goal was based on the assumptions that: (1) about 15 percent of beneficiaries have other health insurance; (2) about 10 percent of beneficiaries are dependents of short-term students; and (3) about 10 percent of beneficiaries will need to maintain continuity of care with a non-network physician. Rather than set their own objectives, the medical commanders in Phoenix and Austin followed uniform goals that were set by the Air Force; in the first year, they were to enroll 20 percent of those beneficiaries eligible for CHAMPUS; in the second year, 40 percent; and, ultimately, 60 percent.

Access to Primary Care

Access to the health care system usually begins with a visit to a primary care provider. With this procedure in mind, the Air Force's CAM programs and Ft. Sill designed into their enrollment systems a "gatekeeper," a primary care provider who is responsible for referring patients to specialists.

Ft. Sill based its gatekeeping mechanism on an existing family practice program. Before the CAM demonstration, health care in Ft. Sill was

organized around five family practice clinics. Any active-duty dependent, retiree, or dependent of a retiree who wanted to join the program was assigned to a panel of family practice physicians (made up of active-duty, civil service, and partnership physicians). The CAM demonstration turned those panels into gatekeepers. Enrolled beneficiaries must call their family practice clinic to make a routine medical appointment. They are guaranteed access to primary care within seven working days.[1]

In the Air Force CAM sites, every enrolled beneficiary is assigned to a primary care physician, a practitioner trained in general or family medicine, pediatrics, gynecology, or possibly general internal medicine. By contrast with Ft. Sill, whose gatekeepers all work within the military treatment facility, the Air Force's gatekeepers include preferred providers who practice outside the military treatment facility. If assigned to a civilian physician, enrollees are expected to call that physician directly for routine or primary care. They retain the option of calling the military for appointments, but the Air Force redesigned CHAMPUS's cost-sharing requirements (as described below) to curb such attempts.

In general, the Air Force tried to assign beneficiaries to gatekeepers working in a military treatment facility before specifying civilian gatekeepers outside. Each of the CAM installations sets limits on the number of patients who can be assigned to a gatekeeper. Luke, for instance, allows up to 500 enrollees for each physician in the family practice clinic for active-duty dependents and 1,500 enrollees for each physician in the clinic for families of retired personnel; Bergstrom assigns between 100 and 300 patients to active-duty gatekeepers for active-duty beneficiaries. (These standards are not intended to be hard and fast. They may change as each local commander learns how to manage the time available to enrollees and nonenrolled beneficiaries more efficiently.) When spaces assigned to military gatekeepers fill up, enrollees get civilian gatekeepers. So far, about three-quarters of the Air Force's enrolled beneficiaries have been assigned to gatekeepers in the military treatment facility, but as enrollment increases, more and more people will be assigned to civilian physicians.

Managing the Air Force's enrollment would be impossible without data systems for tracking individual enrollees and their physicians. Rather than

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1. Presumably, patients with critical or serious conditions would be seen within hours or a day or two. Less urgent care might therefore have to wait the full seven-days. However, seven days may not be long at all for patients with chronic conditions. Indeed, imposing a seven day maximum may be an inefficient use of the military's resources if those patients with ongoing problems (such as controlled hypertension) can actually wait to be seen for one to four weeks without danger of prolonged illness. See Howard Simon and others, "An Index of Accessibility for Ambulatory Health Services," *Medical Care*, vol.17 no.9 (September 1979).

build such a system from scratch, the Air Force modified an existing information system, the so-called Automated Quality of Care and Evaluation Support System (AQCESS). Every military treatment facility uses AQCESS, not only to assure quality, but also to help with registering and tracking inpatients and scheduling outpatients' appointments. For the CAM sites, the Air Force modified AQCESS to keep track of enrolled beneficiaries, including their age, sponsor, and primary care physician, and the location and specialties of network physicians.

Inducements to Enroll

In exchange for giving up some choice of civilian providers, enrolled beneficiaries receive reductions in CHAMPUS cost-sharing (see Table 4). Both the Army and the Air Force waive the CHAMPUS deductible for enrollees. As for the CHAMPUS copayment--dependents of active-duty beneficiaries pay 20 percent of allowable charges, and retirees and their dependents pay 25 percent--the Army reduces the CHAMPUS rate by five percentage points and applies this reduction to hospital as well as to outpatient services (the only service to do so).

The Air Force's coinsurance provisions are more complicated. For certain types of routine primary care, such as a conventional office examination, enrollees share none of the physicians' charges. This system is intended to create some parity between enrollees who receive care from civilian providers and enrollees receiving care in military clinics. For more specialized care, and for ancillary services such as laboratory tests and x-rays, enrollees pay 20 percent of discounted charges if they are dependents of active-duty beneficiaries, or 25 percent if they are retirees or dependents of retirees. These differing levels of cost-sharing have apparently caused some confusion. When, for example, an enrolled beneficiary expects that a routine visit to his or her primary care physician will cost nothing, a bill for 25 percent of any ancillary charges may come as an unpleasant surprise.

Enrollees of both services also receive enhanced coverage for certain preventive care services. Enhancements are least generous in Ft. Sill, where routine optometry examinations--which might otherwise be unavailable to retirees and their dependents--are made available to all members. The Air Force allowed its local CAM managers to offer enhanced coverage for such preventive services as Pap smears and mammographies.

TABLE 4. COST-SHARING UNDER CHAMPUS AND THE CATCHMENT AREA MANAGEMENT DEMONSTRATIONS IN 1990

	Not Enrolled[a]	Navy Enrollees		Air Force Enrollees		Army Enrollees	
		In-Network	Out-of-Network[b]	In-Network	Out-of-Network[b]	In-Network	Out-of-Network[b]
Active-Duty Dependents							
Outpatient Deductible	$50/$100	$25/$50	$50/$100	None	c	None	c
Copayment for Physician Services	20% of allowable charges	15% of discounted charges	25% of allowable charges	None or 20% of discounted charges[d]	c	15% of discounted charges	c
Copayment for Hospital Services	Greater of $25 or $8.35 a day	Greater of $25 or $8.35 a day	Greater of $25 or $8.35 a day	Greater of $25 or $8.35 a day	c	Greater of $25 or $8.35 a day	c
Retirees and their Dependents							
Outpatient Deductible	$50/$100	$25/$50	$50/$100	None	c	None	c
Copayment for Physician Services	25% of allowable charges	20% of discounted charges	30% of allowable charges	None or 25% of discounted charges[d]	c	20% of discounted charges	c
Copayment for Hospital Services	Lesser of $235 or 25% of billed charges	Lesser of $235 or 25% of billed charges[e]	Lesser of $235 or 30% of billed charges	Lesser of $235 or 25% of billed charges[e]	c	Lesser of $235 or 20% of billed charges[e]	c

SOURCE: Congressional Budget Office.

a. Standard CHAMPUS.
b. Applies to use inside the catchment area. Outside use is covered by standard CHAMPUS.
c. Not covered; beneficiary responsible for all charges.
d. No copayments for physician services during routine primary care visits; however, coinsurance rates apply to any ancillary services required during such visits.
e. Hospital charges may be billed at a discount.

When the CAMs started, no service was allowed to encourage enrollment by reducing the benefits of standard CHAMPUS; that is, by requiring nonenrollees to pay higher deductibles or steeper coinsurance rates. Nonetheless, the CAM sites here may have subtly penalized nonenrollees by restricting their access to military care. Under current rules, first priority for military care goes to active-duty personnel, second to dependents of active-duty personnel, and third to military retirees and their dependents and survivors. But in both Williams and Bergstrom Air Force Bases, an enrolled retiree could win out over a nonenrolled active-duty dependent for a scarce slot in a military clinic--an appealing inducement to enroll, given that visits to military clinics are free and hospital stays generally cost about $8 a day. Because Luke Air Force Base runs separate outpatient clinics for active-duty dependents and retirees, enrolled retirees there have priority over nonenrolled retirees but do not compete directly with nonenrolled active-duty dependents for appointments with military physicians.

Priority for enrollees may also mean reduced access for beneficiaries who are 65 years old or older. Luke, for instance, is clearly heading in the direction of not providing direct primary care for beneficiaries who are eligible for Medicare. It may only be a matter of time before the rumbles of discontent among area retirees turn into roars of protest.

The situation for enrollees in Ft. Sill is unclear. In theory, they enjoy improved access to military care; indeed, the local CAM handbook warns nonenrollees of potential delays in receiving appointments at the military treatment facility. In practice, however, Ft. Sill has not actually pitted enrollees against nonenrollees. Since it runs one of the Army's largest family practice programs, it has enough capacity to provide primary care to any interested beneficiary.

Enrollment

Halfway into its second year of operation, Ft. Sill's CAM program had enrolled about 14,400 members, 43 percent of the area's CHAMPUS-eligible beneficiaries (see Table 5). Retired military personnel and their dependents enrolled in greater proportion than did dependents of active-duty personnel. The Air Force's enrollments have been less extensive. At the end of their CAM demonstration's first year of operation, Luke and Williams Air Force Bases had enrolled about 8,300 members, about 16 percent of the Phoenix area's eligible beneficiaries; and Bergstrom Air Force Base had enrolled 5,700 beneficiaries, about 18 percent of the eligible population. In both Air Force sites, enrollment rates have been higher among active-duty dependents than among retirees and their dependents.

TABLE 5. EXTENT OF ENROLLMENT IN CATCHMENT AREA MANAGEMENT DEMONSTRATION SITES

Catchment Area	Active-Duty Dependents	Retirees and Dependents	Total
Ft. Sill			
Eligible[a]	19,730[b]	13,350	33,080
Enrolled[c]			
Number	7,290	7,080	14,360
As a Percentage of Eligible Population	37	53	43
Phoenix			
Eligible	18,450	34,650	53,100
Enrolled[c]			
Number	3,385	4,940	8,330
As a Percentage of Eligible Population	18	14	16
Bergstrom AFB			
Eligible	10,290	21,150	31,440
Enrolled[c]			
Number	2,570	3,140	5,700
As a Percentage of Eligible Population	25	15	18
Ft. Carson			
Eligible	47,830	36,450	84,280
Enrolled[d]			
Number	2,970	2,150	5,120
As a Percentage of Eligible Population	6	6	6
Charleston			
Eligible	44,100	25,630	69,730
Enrolled[e]			
Number			3,700
As a Percentage of Eligible Population	n.a.	n.a.	5

SOURCE: Congressional Budget Office.

NOTE: n.a. = not available.

a. Based on counts of military beneficiaries reported by the Defense Enrollment and Eligibility Reporting System for the end of fiscal year 1990.
b. Excludes an estimated 3,700 dependents of active-duty personnel who are short-term students; few such dependents actually enrolled.
c. Enrolled as of April 1991.
d. Enrolled as of January 1991.
e. Enrolled as of June 1991.

What accounts for Ft. Sill's comparative success in enrolling members, particularly among retired beneficiaries? Perhaps Ft. Sill's beneficiaries generally had less to lose in the way of free choice by enrolling--or more to fear from not enrolling. Unlike the Air Force installations, Ft. Sill runs a large family practice program that has room to treat most retired beneficiaries. In addition, beneficiaries in Ft. Sill are far more likely to live conveniently near the military hospital than in Phoenix or Bergstrom: 96 percent of Ft. Sill's active-duty dependents and 83 percent of its retired beneficiaries live within 10 miles of the Army hospital. By contrast, only 77 percent of the Phoenix area's active-duty personnel and 57 percent of its retired beneficiaries live that close to an Air Force hospital. In Bergstrom, only 65 percent of active-duty personnel and 41 percent of retired military personnel and their dependents live within 10 miles of the Air Force hospital.

These circumstances suggest that a relatively high proportion of Ft. Sill's beneficiaries, both from active-duty and retired military families, depend on the military for care. Therefore, for many retirees, enrollment probably involved no major sacrifice; no need to give up free choice of civilian providers. Furthermore, because Lawton, Oklahoma, is a "medically isolated" area with a paucity of civilian health care providers, retired beneficiaries may have been especially keen to preserve their access to direct military care.

Another possibility is that Luke, Williams, and Bergstrom marketed memberships less aggressively than did Ft. Sill. As its enrollment goals would suggest, the Air Force made a deliberate decision to phase in membership, largely to give local CAM managers time to develop experience in managing an enrolled population.[2] As the Air Force's demonstrations gather steam, the differences with Ft. Sill may narrow. In addition, the Air Force CAMs were at a disadvantage in recruiting enrollees by mail, because they had only the names and addresses of Air Force retirees living in the area. The Defense Enrollment and Eligibility Reporting System (DEERS) could have provided lists of names and addresses of all retirees, but lists alone were impractical for a direct mail effort. Thus, local CAM managers went to the Air Force's retired personnel center, which provided names and addresses of Air Force retirees printed on mailing labels.

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2. Tactical Air Command, *Air Force Catchment Area Management Demonstration Proposal* (Langley Air Force Base, Virginia, February 1988), p. 26.

RESTRICTIVE ENROLLMENT THAT IS NARROW IN SCOPE

Ft. Carson offered beneficiaries living in Colorado Springs the same enrollment option as in Ft. Sill. However, it targeted a relatively narrow subset of the beneficiary population. Although all beneficiaries eligible for CHAMPUS were also eligible to enroll in its program, Ft. Carson tried especially hard to recruit people who had previously used CHAMPUS.

At the start of the demonstration, the local CAM managers sent direct mailings only to beneficiaries who had filed CHAMPUS claims the previous year. The office administering CHAMPUS provided the names. Now that the demonstration is well under way, Ft. Carson works with local hospitals and physicians (many of whom belong to its network) to identify potentially high-cost beneficiaries as they enter the civilian system for care, and tries to enroll them on the spot.

Access to Primary Care

Ft. Carson does not use individual gatekeepers. When beneficiaries living in Colorado Springs need care, their first step is often a phone call to one of the area's military clinics. Army beneficiaries typically call clinics located in Evans Army Hospital, and Air Force beneficiaries call clinics in the Air Force Academy Hospital or a freestanding clinic at Peterson Air Force Base. If appointments with military providers are not available, any beneficiary who calls Evans Army Hospital, and any enrolled beneficiary who calls an Air Force facility, is referred to that facility's Health Care Finder. (The Health Care Finders working in Air Force facilities are employees of the Army.)

Inducements to Enroll

In addition to lowered cost-sharing, Ft. Carson offered enrollees several benefits not available under standard CHAMPUS. These included Pap smears and partial hospitalization for mental health care. The Ft. Carson program is considering further enhancements to include "wellness screenings" for such problems as breast cancer and hypertension.[3] Because enrollment is narrow in scope, priority for enrollees has simply not been an issue.

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3. Starting in 1991, many of these benefits will be made available under standard CHAMPUS.

Enrollment Figures

As of January 1991--well into the second year of Ft. Carson's demonstration--about 5,100 beneficiaries had enrolled in the CAM plan, or only 6 percent of the 84,000 eligible for CHAMPUS and living in Colorado Springs. However, 55 percent of the enrolled beneficiaries had previously used CHAMPUS for care outside the military treatment facility. These 2,800 or so enrollees account for almost one-half of the beneficiaries who used CHAMPUS in 1990.

UNRESTRICTIVE ENROLLMENT

In Charleston, the Navy offered a less restrictive program of enrollment known as "CAMCHAS Prime." Though enrollees are expected to receive care in the military or through the network of civilian providers, they may still receive care out of the network. For staying in the network, enrollees pay only half the standard CHAMPUS deductible ($50 a family in 1990 instead of $100), and five percentage points less on standard CHAMPUS coinsurance. In the event that they go out of the network for care, they pay the standard CHAMPUS deductible plus a 5 percentage point penalty on the CHAMPUS coinsurance rate.

Alongside CAMCHAS Prime, the Navy also offers a wide-open program of managed care. It works this way: Anyone desiring health care in the military treatment facility, whether or not enrolled, must call the Navy's "Health Care Finder," actually a staff of 14 civilians who are trained as benefit advisors. (The Navy thought a gatekeeper mechanism for enrollees would be cumbersome to manage.) If direct care is not available, the Health Care Finder will make an appointment--via a three-way conference call--with a primary care physician in the Navy's civilian network: a family practitioner, general practitioner, internist, pediatrician, obstetrician, or gynecologist. It then is up to the beneficiary to decide whether to use the network provider. Those who do get the advantage of the negotiated discounts from prevailing CHAMPUS charges.

CAMCHAS Prime enrollees enjoy no special priority for access to primary care in Charleston's hospital. Enrollees and nonenrollees alike must call the Health Care Finder to make an appointment in a military clinic, and all are subject to current priorities. Thus, a retiree enrolled in CAMCHAS Prime will be no more likely, and perhaps less likely, than a nonenrolled dependent of someone on active duty to get a scarce appointment with a military provider.

Indeed, CAMCHAS Prime is not really integral to the Navy's managed care efforts. The Health Care Finder and the preferred provider network together form the heart of the Charleston CAM demonstration. Take away CAMCHAS Prime, and nothing would really change. Reflecting its secondary status, CAMCHAS Prime has so far enrolled few beneficiaries. In September, the CAM demonstration's first full month of operation, about 1,600 beneficiaries signed up. Enrollment has climbed modestly in recent months, reaching 3,700 by June. That figure accounts for about 5 percent of Charleston's CHAMPUS-eligible beneficiaries.

DISCUSSION OF THREE APPROACHES

The first approach to enrollment--used by the Air Force and Ft. Sill--carries two advantages. By restricting enrollees' choice, local commanders more easily collect data on beneficiaries' use of health care. And by enrolling as many as possible, local commanders get a firmer handle on beneficiaries' overall demand for care, and should thereby improve their ability to plan and budget.

The one danger is that by casting the enrollment net too wide, the CAM sites might unnecessarily raise costs if beneficiaries who had not previously used the military health care system decided to enroll. Survey data suggest that about 10 percent of active-duty dependents and more than two-fifths of all retired families living inside catchment areas obtain most of their health care from civilian providers. A substantial amount of that care is financed not by CHAMPUS, but by private health insurance, often provided by an employer. If beneficiaries with other health insurance enroll in significant numbers, and drop their private coverage, DoD will shoulder expenses previously covered outside the military health care system.

By targeting CHAMPUS users, Ft. Carson naturally reduces the risks associated with enrolling too many beneficiaries. In fact, the Army officer overseeing the CAM demonstrations had these risks very much in mind when he expressed this sentiment:

> Hospital commanders are headed for trouble if they try to enroll too many people and tackle several medical specialty shortages simultaneously....If you enhance benefits and you increase enrollment to the extent you cannot manage it, the only thing that is going to go up is cost.[4]

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4. Colonel Henry Beumler of the Army Health Services Command as reported in *Air Force Times*, December 3, 1990.

The Air Force, too, is considering the advantages of targeting high-cost CHAMPUS users for enrollment. The trade-off, however, is lessened control over the general demand for health care in the catchment area. The narrower the enrollment, the less improved will be the local commander's ability to plan and budget for a defined population.

The Navy's unrestrictive approach has the advantage of exposing everyone to the possibilities of managed care. It resembles the preferred provider option offered by many private-sector health plans, under which beneficiaries needing primary care decide whether or not to use a preferred provider at each encounter; that choice is essentially the enrollment decision. On the other hand, it may not improve a local commander's ability to plan and budget for a defined population. Indeed, the Health Care Finder makes no effort to monitor the flow of appointments for beneficiaries--the Navy simply keeps track of CHAMPUS claims as they are paid. This means that once a beneficiary finds a network physician through the Health Care Finder, he or she can effectively make appointments on his or her own, never notifying the Navy. So long as the eventual claims are submitted by a network physician, the Navy will pay them at the discounted rate, regardless of how patients made their appointments. Should there be any abuse, such as a network physician encouraging patients to skip the Health Care Finder to build up volume, the Navy will have to deal with it on a case-by-case basis.

Other Health Insurance

The wider the scope of a military managed care plan, the greater the risks from enrolled beneficiaries dropping other health insurance. Evidently, the services were worried that an attractive program of managed care might trigger just such a shift. In setting enrollment goals, for instance, Ft. Sill assumed that beneficiaries with other health insurance would not (or should not) join.[5] The Navy did not discourage such beneficiaries from enrolling, but urged them to keep their private health insurance. Its membership handbook states: "We encourage continuing these other health insurance plans because CAMS is a 2-year demonstration project. . .we suggest that you retain whatever other insurance benefits you many now have. You will still be able to enjoy the benefits of the CAMS program."

The incentive to drop any private health insurance will probably depend on how much beneficiaries spend for that coverage. Beneficiaries who receive

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5. About 7 percent of Ft. Sill's enrolled beneficiaries report having some form of private insurance, but it is not possible to distinguish those with CHAMPUS supplemental policies from those with regular insurance, nor active-duty dependents from retirees and their dependents.

free health insurance from their employers would have no reason to end that coverage. Indeed, they may have no particular interest in enrolling, unless the military offers enhanced benefits that are not covered by private insurers. Since it costs beneficiaries nothing to enroll, they may join a managed care program to "cherry pick" the new benefits, or perhaps to use selected ancillary services such as the pharmacy (where prescriptions are free), and thus raise overall costs.

It is more likely that enrollees would be beneficiaries who contribute several hundred dollars a year to their private insurance coverage. Nationwide, about 40 percent of employees are required to pay part of the premium for single coverage by their employer-provided health insurance, with contributions averaging about $400 a year. For coverage of families, at least two-thirds of employees are required to pay part of the insurance premium, with contributions averaging about $1,000 a year.

Why would a beneficiary who is eligible to use the military health care system pay several hundred dollars a year for private coverage? For some, it may be a question of "taste" for care in the civilian sector, rather than in a military treatment facility where the amenities are scarcer and choice of providers more limited. For others, CHAMPUS's generous procedures for coordinating benefits may well cover the cost of private premiums. When it acts as a second payer, CHAMPUS pays remaining costs up to the amount it would have paid had there been no other health benefit plan involved. Consider the hypothetical example of a retired family that has $4,200 in medical expenses and no other insurance. As a primary payer, CHAMPUS would cover $3,075 (up until 1991), leaving the family to pay $1,125. But suppose that same family had private health insurance, to which they contributed the nationwide average of about $1,000 a year in premiums. Their policy might typically cover $3,040. As a second payer, CHAMPUS would pay the remaining $1,160. It would have cost them $125 to give up the private insurance.

This example suggests that the higher one's anticipated expenses (or the greater the degree of one's aversion to risk), the greater the value of paying for private insurance. By enhancing CHAMPUS's benefits with reduced cost-sharing, the CAM demonstrations diluted the financial incentive to hold other coverage. An interesting question is whether differences in each service's benefit package may have had a different effect on attracting those with other health insurance. For instance, Army enrollees enjoy cost-sharing provisions that are somewhat more generous than Navy enrollees. Has the Army attracted a higher proportion of eligibles with other insurance? Have a higher proportion of Army enrollees covered by other health insurance discontinued

their coverage? Answers await a more definitive analysis of the CAM demonstrations' enrollment experience.

The needs of military retirees and their dependents who are 65 years old or older pose a special problem for the services. Since Medicare pays their bills for health care outside the military, DoD has no financial interest in managing their civilian care, and hence excludes from enrollment beneficiaries who are eligible for Medicare. But military specialists should treat a certain number of older beneficiaries to develop and maintain their skills. The challenge for DoD is to strike a balance between the needs of enrolled beneficiaries and people who are eligible for Medicare.

CHAPTER V

WAYS OF SAVING MONEY

Saving money is one of managed care's paramount goals. When applied to the military, managed care can save money, at least potentially, in these four ways:

- Negotiated fee discounts;
- Control over patients' access to specialized care;
- Managed use of civilian providers in the military networks; and
- Managed use of providers in military treatment facilities.

In practice, the CAM demonstrations have emphasized the first two approaches. All site managers have aggressively sought discounts from CHAMPUS's prevailing charges. And all site managers have tried to maximize the use of existing military facilities by controlling beneficiaries' access to specialists. In some instances, access to mental health care received special attention. But the latter two approaches generally received short shrift.

FEE DISCOUNTS FROM PREFERRED PROVIDERS

Negotiating fee discounts from civilian hospitals and physicians is the services' prime method of reducing costs. Physicians who enter into a CAM arrangement, whether as a preferred provider or a partnership physician, almost always agree to accept a negotiated discount from prevailing CHAMPUS charges. Moreover, these arrangements typically oblige physicians to extend the discounted rate to all CHAMPUS patients, not just those who have chosen to enroll in a CAM health care program. Prevailing charges are set state-by-state and represent the eightieth percentile of billed charges received by CHAMPUS in the previous year. Under normal CHAMPUS rules, the allowed charge for a visit to a physician is the lesser of the physician's billed charge and the prevailing charge for that physician's state.

Limits to Discounting

The trouble with basing discounts on prevailing charges is that billed charges may be lower. For example, suppose that the prevailing charge for a particular set of procedures is $300, but actual billed charges are $250. If the military negotiates a 15 percent discount from the prevailing charge level, the physician receives $255, or $5 more than he or she might have received otherwise.

The Army and Air Force in particular were handicapped in setting a discount by lack of information about actual charges. When negotiating with local physicians, they knew only the prevailing charges for a given specialty. That handicap may not have been too serious in a relatively high-cost area like Phoenix--where local billed charges tend to be higher than the prevailing state rate--but in a rural area like Ft. Sill, a discount against the prevailing rate may not be a bargain. In one instance, when CAM managers were absolutely certain that actual charges were less than prevailing rates--for mental health services in the outlying areas of Bergstrom's catchment area--the discount was based on the lower of the CHAMPUS prevailing rates or a fee schedule.

The Navy had an edge over the other services because it had the means to review actual charges. Working with claims data provided by CHAMPUS's fiscal intermediary for the Mid-Atlantic Region, Blue Cross/Blue Shield of South Carolina, the Navy developed a data base known as the Catchment Area Management Charleston Information System (CAMCHIS). It can track billing histories and clinical decisions for each of the 670 physicians--representing at least 80 percent of the physicians practicing in the area--who has filed CHAMPUS claims over the past two years. Local CAM managers were able to analyze each specialty's average billing history over the past year, and so could ask for discounts against prevailing charges that produced reasonable discounts against actual charges--what the Navy calls "fair-market" discounts. For example, if the actual charge for a procedure is $60, and the CHAMPUS prevailing rate for the state is $75, the Navy might have insisted on a relatively high 32 percent discount off the prevailing rate in order to get a real discount of 15 percent.

Range of Discounts

Bearing in mind the limitations of setting discounts against prevailing charges, the CAM demonstrations negotiated discounts that generally ranged from 10 percent to 30 percent. These rates compare favorably with the 9 percent to 19 percent range of discounts typically negotiated by civilian preferred

provider organizations.[1] Discounts varied by site, by specialty, and sometimes even among specialists in a given site. Such was the case in Ft. Sill, where CAM managers who patched together a network on their own typically received discounts of 10 percent to 25 percent. Within a given specialty, it was possible for different physicians to have negotiated different discounts. Those physicians offering the highest discount for a specialty did not receive an exclusive agreement because of Ft. Sill's concern over maintaining good community relations.

In Ft. Carson and the Air Force sites, the process of negotiating discounts was made somewhat easier by the selection of physician networks already in existence. Rather than deal with dozens of independent practitioners, the CAM managers had only to negotiate with a few corporate entities. In Bergstrom, for instance, one of the participating networks offered a 20 percent discount across the board, and the other offered discounts ranging from 20 percent for specialists to 30 percent for primary care practitioners. An ad hoc group of obstetricians offered a 15 percent discount.

Very shortly, however, the Army and Air Force CAM managers will be receiving detailed claims data. Since agreements with preferred providers last only one year, the services will be able to use this new information to renegotiate more favorable discounts, if needed.

For inpatient services provided to military patients in civilian hospitals, CHAMPUS pays a flat fee based on diagnosis-related groups (DRGs). Because these DRG reimbursement rates are relatively stringent, hospitals that joined a CAM network tended to offer limited discounts (5 percent) on their inpatient services. Austin was a major exception. Although Austin's military population makes up only 5 percent of the total population (see Table 2), local hospitals eagerly engaged in a "price war" to become part of Bergstrom's network. This behavior is not entirely surprising because so many of Austin's hospitals operate at below 60 percent of capacity (one-half versus less than one-third in Phoenix, see Table 3). One large institution, the "flagship" hospital in Bergstrom's network, offered a 22 percent discount from the CHAMPUS DRG rates.

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1. John Schmitt, "Provider Payment Systems," in Dorothy Cobbs, ed., *Preferred Provider Organizations: Strategies for Sponsors and Network Providers* (Chicago: American Hospital Association, 1989), p. 52.

Risk of Increased Volume

Although straightforward in application, the discounted fee approach provides no economic incentive to control use. For this reason, this type of reimbursement is losing popularity among civilian preferred provider organizations and health maintenance organizations.[2] Indeed, studies of civilian health maintenance organizations have found that incentives tied to performance by individual physicians, as well as policies that placed physicians at financial risk for too high a rate of hospital referrals, were associated with significant reductions in the frequency of primary care visits.[3] Physicians may find it easy to offset negotiated discounts with an added visit or an extra laboratory test. Users of the discounted fee approach must therefore be vigilant to inappropriate increases in volume, as they are in Ft. Carson.

CONTROLLING ACCESS TO SPECIALIZED CARE

The previous chapter discussed how the various enrollment mechanisms govern access to primary care. In sites with wide-based, restrictive enrollments, the primary care provider is the gatekeeper. In sites with targeted or less-restrictive enrollment, a Health Care Finder directs beneficiaries to a primary care provider. What happens when the primary care provider wants to refer a patient to a specialist? Three of the five CAM sites have seized on this option to refer patients to military treatment facilities. However, CAM has generally done little to eliminate unnecessary referrals to specialists--something that Medicare experience suggests is the key to operating a profitable health maintenance organization contract--or inappropriate hospitalizations.

Limiting Discretion of Civilian Providers

By limiting primary care providers' latitude in referring patients to specialists, three of the five CAM sites have increased referrals to the military.

Charleston tries to channel patients to the military treatment facility by limiting the choice of civilian providers. When a primary care provider thinks a patient needs specialized care, he or she must refer that patient back to the

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2. Marika Gordon and Randall Herman, "Reimbursement Methodologies," in Peter Boland, ed., *Making Managed Healthcare Work* (New York: McGraw-Hill, 1991), p. 336.

3. Arnold Milstein and others, "In Pursuit of Value: American Utilization Management at the Fifteen-Year Mark," in *Making Managed Healthcare Work*, p. 375.

relevant clinical department in the military hospital. If it is an emergency, the physician may phone the chief of that department; otherwise a written consultation sent by mail will suffice. The clinical chief evaluates that consultation and decides whether to see the patient. If his or her department cannot or does not want to see the patient, the Health Care Finder will refer the patient to a network specialist and automatically preapprove an admission to a civilian hospital. In theory, the clinical chief could decide that hospitalization is unwarranted, but the Navy has no formal procedures for making such a decision.

Local CAM managers are enthusiastic about this arrangement because of the opportunities it creates for individual departments to alter their patterns of practice. For the first time, they can take into account the costs of treating one type of patient rather than another. Less is known about the enthusiasm of civilian providers for changing their referral patterns. Physicians like to refer patients to people they know, and for many civilian physicians the military may be an unknown quantity.

Luke and Williams Air Force Bases place similar limits on primary care providers. When civilian gatekeepers want to refer patients to a specialist, they must first contact one of the CAM demonstration's "case managers." That person checks on the availability of care with the relevant military medical department. If direct care is not available, the case manager books an appointment for specialty care with a network physician. Because most of the network physicians belong to one of three hospital-based provider organizations, it is likely that the patient will be referred to a specialist practicing in the same network as the primary care gatekeeper. Specialists receive specific instructions about what services are authorized. If the specialist suggests additional services, the enrollee is supposed to check back with the primary care physician or the CAM office.

The Air Force encourages network physicians to send patients to the military treatment facility for ancillary services. Alternatively, if the CAM network includes an ancillary provider (that is, a firm providing laboratory services) physicians must use that firm.

The Air Force set up case management teams for people with disabling injuries, catastrophic illness, or long-term disability. Case managers work directly with patients and their primary care physicians to plan comprehensive rehabilitation services. It was to aid case management that the Air Force added such firms to its external networks as suppliers of infusion therapy and equipment for monitoring fetal activity in the home.

Civilian physicians who wish to hospitalize patients must first check on the availability of care in the military hospital. Under current CHAMPUS rules, if the medical commander indicates that the military cannot provide the necessary care by issuing a "nonavailability statement," coverage by CHAMPUS is guaranteed. Under the CAM demonstrations, the Air Force has added a second layer of regulation to curb inappropriate hospitalization. It modified CHAMPUS's existing contracts with state peer review organizations to provide prospective review of medical and surgical hospital care for enrolled beneficiaries[4] As before, civilian physicians who wish to hospitalize a beneficiary in a military institution must call the military. But if the military cannot provide care, physicians must then call the peer review organization to get the admission authorized. Only if the review organization believes that hospitalization is warranted will CHAMPUS help pay for the cost of that care.

Besides authorizing admissions, the peer review organizations sample 50 percent of past admissions to review their appropriateness after the fact. They do not review hospital stays concurrently, because the Air Force felt that CHAMPUS's prospective reimbursement method (based on diagnosis-related groups) would curb excessive lengths of stay. Still, some local CAM managers believe there is a need for such reviews.

Two of the CAM sites place no particular limits on primary care providers. In Bergstrom and in Ft. Carson, the civilian primary care providers have complete latitude over their patients' outpatient care, so long as they refer patients to network specialists. They do not have to contact the military before referring patients to a specialist. (If they refer patients out of the network, neither CHAMPUS nor the patients will have to pay the bill.) Only when a patient requires admission to a hospital or same-day surgery must civilian practitioners contact the Health Care Finder, who in turn checks the military's ability to provide that care.

Although this arrangement might seem to encourage unnecessary referrals, Bergstrom's network design is unique and its medical commander is therefore not concerned. Most primary care gatekeepers belong to one corporate network, and most subspecialists to another. It would thus be unlikely for primary care providers to refer patients excessively to the "competition." By contrast, Ft. Carson's medical commander is considering limiting providers' discretion.

Ft. Sill has less trouble keeping beneficiaries in its military treatment facility, because all its gatekeepers are military. When gatekeepers determine

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4. In Phoenix, the Health Services Advisory Group, Inc.; in Austin, the Texas Medical Foundation.

that patients need specialized care (except in the case of mental health care), they refer patients in writing to the chief of the military's relevant specialty clinic. The chief of that clinic must then decide within 24 hours whether the military treatment facility--augmented by its partnership physicians--can provide care in a "timely" fashion. "Timely" depends on the severity of the patient's condition as described in the written consultation. (Ft. Sill has found that primary care physicians must be educated to include enough information in the consultations.)

If timely care is not possible, particularly for certain types of advanced services, Ft. Sill will try to refer patients to the nearest Army tertiary care facility, Brooke Army Medical Center in San Antonio, Texas. But since Brooke lies outside the 40-mile boundary of the catchment area, patients can decline such referrals. In that case, the Health Care Finder directs them to a civilian provider in the community. A similar situation arises when patients are referred outside the catchment area for mental health care. Ft. Sill is unique among the Catchment Area Management sites in having external arrangements with hospitals and psychiatrists who practice outside the catchment area. Again, patients can decline referral to civilian providers outside the catchment area without risking loss of their CHAMPUS benefits.

To keep costs down, the local CAM managers would like the authority to compel beneficiaries to use Brooke, at least in certain cases. Such a requirement might make treatment inconvenient, but it might also better assure its quality. The House version of the National Defense Authorization Act for Fiscal Years 1992 and 1993 moves in this direction by permitting the Secretary of Defense to modify the 40-mile radius catchment area designation for inpatient care, and thus compel beneficiaries to use hospitals outside the standard catchment area. However, for outpatient care, beneficiaries would still be free to decline referrals outside the catchment area.

When the military cannot provide timely care, or when patients refuse referral out of the catchment area, Ft. Sill's Health Care Finder steps in, and within 48 hours makes an appointment with a network physician. (The civil servants who make up the staff of the Health Care Finder each specialize in a particular clinical area, such as orthopedics or obstetrics.) In 1990, however, relatively few outpatients actually made it to this point. Whereas the partnership physicians handled about 76,000 visits in 1990, the members of Ft. Sill's external network handled fewer than 5,000 visits. This generally works out to fewer than 10 visits a month by enrolled beneficiaries to the office-based physicians of Ft. Sill's network. Since patient volume is a major reason that providers join preferred provider organizations, one might therefore question Ft. Sill's ability to retain physicians.

Mental Health Care

Under the standard CHAMPUS program, a national firm (HMS, Inc.) is responsible for reviewing use of mental health services. It authorizes hospital admissions, conducts concurrent reviews of inpatient mental health care, and reviews outpatient psychotherapy in excess of two sessions a week or 23 sessions a calendar year. The role of HMS varied under the different CAM demonstrations.

Under the Army demonstrations, HMS has been cut out altogether. In Ft. Sill, patients needing treatment for a psychiatric problem are referred to a special case management team, which includes a civilian social worker employed under the medical chief of mental health services. (Ft. Sill is trying to recruit a psychologist to join the team.) That team, and not HMS, will determine and preapprove specific types of care, with an emphasis on outpatient care and short-term hospitalization. Only then will the Health Care Finder match the patient with a mental health provider (physician or hospital in the network).

With the opening of a 12-bed inpatient psychiatric ward in January 1991, Ft. Carson adopted new procedures for managing mental health care. Before beneficiaries are admitted to a civilian institution--including Air Force beneficiaries who have enrolled in the Army's CAM plan--their cases must be reviewed by Ft. Carson physicians. They, not HMS, decide whether the patient needs intensive, short-term therapy on an inpatient basis or a course of long-term care.

In the Air Force CAM, the primary care gatekeepers have nothing to do with mental health care because of CHAMPUS's contract with HMS. In Phoenix, enrolled beneficiaries who think they need mental health care skip the gatekeeper and call the CAM manager directly for a referral to either a military mental health clinic or a preferred civilian provider. In Bergstrom, enrollees may call directly either the military's mental health clinic or a network physician.

Bergstrom Air Force Base was the only site that modified the existing HMS contract to provide individual case management. HMS is supposed to work with a military case manager (a registered nurse) to develop individual case management treatment plans. However, it has turned into a time-consuming, iterative process, in which the military case manager spends inordinate time on the phone discussing modifications of treatment plans and arguing for treatment plans that are tailored to local needs.

MANAGING USE OF NETWORK PHYSICIANS

The most direct way for any managed care plan to control use is to direct beneficiaries to cost-effective doctors and hospitals. But selecting cost-effective providers has proved to be one of the greatest challenges in the civilian sector. Criteria are limited for identifying the "right" physician. And the desire to recruit only cost-effective providers, and therefore operate a relatively small network, may clash with the compelling drive to expand the network so as to give beneficiaries the greatest possible access to care. In the civilian sector, the usual way to form a network is to enlist a percentage of providers, or to select providers by location or specialty, and then apply screening criteria that will rule out some of the worst practitioners, perhaps the bottom 10 percent to 15 percent.[5]

Even with a rigorous selection process, it is essential to monitor providers and apply sanctions. Some providers will ignore agreed-upon referral provisions, and others will be admitted to drug and substance abuse programs or disciplined by a federal or state agency.[6] A system of checks and balances will also hold providers accountable for quality and costs.

None of the CAM demonstrations have selected providers on the basis of cost-effectiveness. Nor have any set up formal systems to monitor providers' patterns of practice.

Provider Selection in Phoenix, Austin, and Ft. Carson

For the three CAM sites that piggybacked on networks that were already set up--Phoenix, Austin, and Ft. Carson--individual selection was not an issue. In choosing their particular networks, the local CAM managers appeared to give prime consideration to geographic coverage and distribution by specialty. In Ft. Carson, the one network that was organized by a large civilian hospital was composed largely of primary care physicians. The others were more specialized networks, more in the nature of health maintenance organizations. One was a mental health center, the other a rehabilitation center.

Luke and Williams started out by building a network of hospitals, not physicians. Seeking an even geographic distribution around the city, they invited a number of area hospitals to join the Air Force's CAM network.

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5. Peter Boland, "Evolving Managed Care Organizations and Product Innovation," in *Making Managed Healthcare Work*, p. 167.

6. Ed Zalta, "Provider Selection," in *Making Managed Healthcare Work*, p. 392.

Once eight had accepted, the Air Force approached the Individual Practice Associations that were affiliated with each participating hospital, and invited them into the network. Such associations have become the primary vehicle through which physicians are able to participate in managed care contracting.[7] Three of the Individual Practice Associations agreed to join the CAM network, and brought in 116 physicians. However, as is not uncommon in such situations, some specialists in the Individual Practice Association did not wish to enter the network. To fill in the gaps, Luke and Williams signed agreements with 96 solo providers.

Bergstrom followed a two-track approach in building a network--one track focusing on hospitals, the other on physicians. Because Bergstrom's hospital is so small, operating fewer than 30 beds, arrangements with hospitals were particularly important. The CAM managers reviewed the accreditation of area hospitals, the range of services offered, and talked informally with staff physicians, to assemble a list of acceptable hospitals. If a hospital did not provide the full range of CHAMPUS-approved services--as was the case with one hospital that would not perform tubal ligations--it was ruled out. Those hospitals considered acceptable were then asked to join the network, and treat Air Force beneficiaries at a discount. Four hospital systems agreed, including a municipal hospital that was sought for its specialized services in pediatrics and trauma.

For physicians, Bergstrom approached two of the Austin area's largest regional organizations of physicians, both of which had previously entered into "partnership agreements." One was mainly a primary care network, the other had a range of specialties. As in Phoenix, certain specialists did not want to participate, so Bergstrom filled in the gaps with independent providers who had privileges in the participating hospitals.

Neither network had specialists in obstetrics or in psychiatry, thus compelling Bergstrom's special attention in these areas. Spurred on by Bergstrom's interest, 10 previously independent obstetricians formed an ad hoc group to deal with the CAM. As for mental health care, one of the network hospitals helped out by forming a group of psychiatrists. Bergstrom then recruited other providers to whom this group typically referred patients, thus creating a second ad hoc organization of providers with common practice patterns.

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7. J. Peter Rich, "IPAs and Physician-Owned PPOs," in *Making Managed Healthcare Work*, p. 243.

Provider Selection in Ft. Sill and Charleston

Ft. Sill and Charleston built networks from scratch, and therefore had an enhanced opportunity to select cost-effective providers. Both missed the opportunity, though for different reasons.

Ft. Sill opened membership in its network to physicians in the state of Oklahoma who satisfied the Army's basic quality-assurance requirements--they had to be credentialed, board-certified or board-eligible, and possess hospital privileges--and who agreed to offer CHAMPUS a discount for their services. Since Ft. Sill already had an extensive program of family medicine, and therefore ample numbers of primary care providers in the military treatment facility, it focused on recruiting physicians who were specialists.

Had Ft. Sill tried to modify its approach so as to select cost-effective providers, it would have faced two impediments. First, it lacked a data system such as the Navy's CAMCHIS, and so was unable to "profile" the practice patterns of potential preferred providers. Second, even if it had such a system, a medically isolated area such as Ft. Sill could not have afforded to be too choosy. Ft. Sill's catchment area ranked below the fifteenth percentile (relative to other military catchment areas) in number of medical and surgical specialists per capita. Some specialties, such as radiology and cardiology, had fewer than three practitioners. Because Ft. Sill saw itself as an integral part of Lawton's small community, it went out of its way to avoid antagonizing the area's physicians. Any qualified specialist who wanted to join the network was therefore admitted, even if a competing specialist offered a more favorable discount. (In other words, Ft. Sill declined to enter into exclusive arrangements with selected physicians on the basis of discounts.) As a result, in many specialties a high proportion of the practicing physicians belong to Ft. Sill's external network (see Table 6).

By contrast with Ft. Sill, Charleston had the means to profile individual physicians. Because the Navy's presence in Charleston is pervasive, most physicians in the area have had some experience with CHAMPUS; the CAMCHIS system therefore had information on at least 80 percent of the physicians practicing in Charleston. By tracking the billing histories and clinical decisions of those physicians, the Navy could have identified the most efficient providers, based on such factors as average number of ancillary procedures per visit. It did not. Any physician who met the Navy's basic credentialing requirements, and who agreed to accept the Navy's "fair-market" discount, was invited to join the network. The Navy did not use the CAMCHIS system to its full potential for fear of violating the federal regulations that govern contracting. The Navy believed that only by setting

up a competitive bidding process could it pick and choose among physicians. The view is apparently not shared by the other services.

Monitoring Providers

Many people within the civilian health care community believe that effective management of outpatient services will only be possible when the practice patterns of individual physicians can be reviewed retrospectively. By itself, such retrospective profiling is not management of use; its role is to provide the information needed to target physicians for special attention (education or special prior and prepayment reviews) or for expulsion from the network.[8]

At this stage of the CAM demonstrations, the services plan only to screen external providers periodically for quality. None has developed formal procedures for identifying "inefficient" physicians," let alone penalties for poor performers (such as expulsion from the network). Lest the services be judged too harshly, however, their private-sector counterparts have yet to do much better. Not many private review programs of use focus on services provided in physicians' offices. Those that do are still developing appropriate patterns of ambulatory care based on diagnosis.[9]

In addition, the services face at least two unique obstacles to preparing checks and balances. First, in nonurban areas such as Ft. Sill, where specialists are often scarce, those physicians may be able to hurt DoD (by withholding their services) far more than DoD can hurt physicians (by expulsion from the network). The second obstacle is more pervasive, and has to do with political constraints on the military's exercise of bargaining power. Just as the need to maintain good community relations has prevented Ft. Sill from making some physicians the exclusive providers for their specialty, so may it prevent other CAM sites from weeding out all but the worst physicians. The opposite side of this problem is that providers outside the network who want to be admitted may exert pressure to get their way. In California, for instance, the state Medicaid program established exclusive provider agreements with a limited number of hospitals, starting in 1982. Political pressures have since forced California to enter into contracts with more and

8. Kevin O'Grady, "Physician Utilization Profiling: The Key to Managing Ambulatory Utilization," in *Making Managed Healthcare Work*, p. 396.

9. Office of the Inspector General, Department of Health and Human Services, *Monitoring Services Provided in Physicians' Offices* (April 1991).

TABLE 6. PARTICIPATION OF CIVILIAN PHYSICIANS IN MILITARY NETWORKS IN CHARLESTON AND FT. SILL

Medical Specialty	Charleston In Practice	Charleston In Network	Charleston Percentage in Network	Ft. Sill In Practice	Ft. Sill In Network	Ft. Sill Percentage in Network
Primary Care						
Family Practice	84	21	25	28	2	7
General Practice	22	0	0	9	0	0
General Internal	81	4	5	14	2	14
Pediatrics[a]	57	8	14	6	4	67
OB/GYN	63	37	59	13	8	62
Psychiatry	54	7	13	b	b	b
Subtotal	361	77	21	70	16	23
Specialized Medical						
Neurology	16	10	63	c	c	c
Dermatology	14	5	36	2	0	0
Cardiology	17	16	94	2	2	100
Allergy	4	3	75	1	1	100
Internal Medicine Subspecialties	44	16	36	2	1	50
Subtotal	95	50	53	7	4	57
Surgery						
General Surgery	61	16	26	10	5[d]	5
Neurosurgery[c]	10	5	50	4	3	75
Specialized Surgery	19	12	63	2	1	50
Orthopedics	28	12	43	7	0	0
Ophthalmology	28	26	93	7	3[e]	43
Otolaryngology	13	6	46	1	1	100
Urology	21	8	38	5	0	0
Subtotal	180	85	47	36	13	36

SOURCE: Congressional Budget Office.

NOTE: Civilian physicians are nonfederal medical doctors providing patient care, excluding residents and fellows. Also excludes osteopathic doctors.

Numbers of practicing physicians are based on county wide totals that are combined to coincide roughly with the military catchment area.

TABLE 6. Continued

Medical Specialty	Charleston In Practice	Charleston In Network	Charleston Percentage in Network	Ft. Sill In Practice	Ft. Sill In Network	Ft. Sill Percentage in Network
			Hospital-Based			
Anesthesiology	44	11	25	3	1	33
Pathology	25	13	52	4	1	25
Radiology[f]	48	43	90	9	0	0
Subtotal	117	67	57	16	2	13
			Other			
Emergency	23	0	0	7	0	0
Occupational	9	0	0	0	0	0
Physical Medicine	2	0	0	1	0	0
Other	9	0	0	4	0	0
Subtotal	43	0	0	12	0	0
Total	796	279	35	143	35	24

NOTES: (Continued)

a. Includes some pediatric subspecialties.

b. Ft. Sill's network includes 27 psychiatrists, an undetermined number of whom practice outside the catchment area. Only 10 psychiatrists practice inside Ft. Sill's catchment area.

c. Ft. Sill groups neurologists with neurosurgeons.

d. In addition, the network includes one surgeon practicing in Oklahoma City, outside Ft. Sill's catchment area.

f. In addition, the network includes one ophthalmologist who is a doctor of osteopathy.

g. Includes diagnostic and therapeutic radiologists and specialists in nuclear medicine.

more hospitals, perhaps diluting the potential advantage to be gained by selective contracting.[10]

If it can overcome these constraints, the Navy at least has the technical ability to profile physicians. In fact, it plans to use the CAMCHIS system to construct a baseline profile for each preferred physician, showing the volume of visits and number of ancillary procedures per visit. Every six months, CAM managers will check actual billings against that profile. If a physician's practice pattern changes for the worse, the Navy will take remedial action that stops short of expulsion from the network. Just as the Navy believes it cannot specifically select cost-effective physicians--because arrangements between civilian physicians and the military are not subject to normal competitive requirements--it believes that it cannot expel physicians who otherwise meet the basic screens for quality and who agree to offer a "fair-market" discount. Instead, it may try to steer patients away from a particular provider.

Although they were at an early disadvantage in analyzing claims data, the Army and Air Force have since developed a sophisticated data system that is comparable with the Navy's. Within the next several months, those systems will be phased in at each of the service's CAM sites. In the meantime, the Army expects soon to give Ft. Sill a version of the Navy's CAMCHIS system.

When Army managers finally have the ability to profile physicians, the Army will not be concerned about the legality of ending arrangements with poor performers. Memoranda of understanding between the Army and civilian physicians give the government the right to terminate an agreement with 90 days' notice and without giving a reason. The Army's problem is a lack of criteria for recognizing poor performers. The Army Surgeon General may have to convene a panel of eminent physicians to devise criteria for sanctioning or rewarding preferred providers.

In the future, the Army might require network physicians to abide by standards of practice for an episode of care. An episode of care refers to a series of health care services provided during a specific period of time and related to treatment for a specific condition. Such a method might (1) establish the total number of acceptable visits--a standard of practice--for each episode of care, (2) apply a complication adjustment to account for severity of illness, or (3) require patients to return to the military if a network physician desires additional visits that exceed the standard of practice. Such a process would require a sophisticated computer system to monitor use. The Navy's claims-based CAMCHIS system would certainly provide enough information, but the information may not be timely because patients and

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10. *The Budget of the United States Government, Fiscal Year 1992*, pp. 155-156.

physicians have as long as 24 months from the time service is rendered to file a claim. The CHAMPUS claims processor must receive claims forms by December 31 of the year following the year in which care was received.

The Air Force, too, plans to analyze the past year's claims in order to track each network physician's volume. In so doing, it might discover modal patterns of physician behavior that could form the basis for use targets.

Ft. Carson has taken steps (as mentioned in Chapter II) to prevent its partnership physicians from earning exorbitant salaries because of an excessive volume of services. When a physician's annual earnings from CHAMPUS deviate from the average earnings of his or her colleagues in the community, CAM managers will step in to correct the discrepancy by renegotiating the discount or forcing changes in the physician's practice. The longer Ft. Carson's partnership physicians have been in the program, the lengthier the billing histories against which Ft. Carson can judge performance. Any departure from that billing history--for example, a shift in billings to more expensive types of services--will invite the scrutiny of the CAM managers.

Because of a possible "sentinel" effect, partnership physicians may actually be less likely than their colleagues working under standard CHAMPUS to "game" the reimbursement system to their advantage. Physicians have some latitude over how to characterize an encounter with a patient, and some may choose to characterize it in a way that yields the highest reimbursement from CHAMPUS. Though this financial incentive exists for physicians in the Partnership Program as well as under standard CHAMPUS, working under the watchful eyes of military officers may weaken its effect.

An interesting question about the CAM sites that relied on existing networks is how they will monitor individual members of those networks. Ft. Carson, Luke, Williams, and Bergstrom Air Force Bases all saved considerable time and money by negotiating with a few corporate entities. But what will happen if each site's CAM managers mark several individual physicians as inefficient, at least when it comes to military beneficiaries? Will they be able to exclude selected providers or subject them to specific conditions? Or will they have to accept every member of the network or none at all?

REVIEW OF CARE IN MILITARY FACILITIES

In the CAM demonstrations generally, the services' commitment to managing use did not extend to care inside military treatment facilities. Practice

patterns of active-duty physicians and partnership physicians are rarely subject to review and modification, nor are individual decisions on treatment for specific patients second-guessed by requiring external authorization or second opinions before elective surgery.

In fact, controls on use would run counter to the current budgeting process, which is based on work load. Put simply, the more beneficiaries who are hospitalized, and the more beds that are kept filled, the higher will be a military treatment facility's budget. With such a reward structure, it may be impossible to hold military providers and their patients' use to the same standards applied to the civilian sector. Furthermore, the lack of strong challenges to physicians' authority is a feature of the military environment that some may feel compensates for problems of inadequate support and resources. Many military physicians would no doubt agree with these sentiments expressed by former Surgeon General of the Navy Donald Custis:

> I found great satisfaction in my navy career....I prefer a physician-patient relationship void of economic factors. In private practice I was always uncomfortable charging a fee for my service, even more so when a patient could have, but did not, pay. I never experienced in military practice any restriction on my surgical judgement.[11]

Potential Problems

Without procedures for managing use in military treatment facilities, the services run a danger of vastly increasing the use of health care as they shift patients from standard CHAMPUS to direct military care. The trouble is that as a military treatment facility's capacity increases, more and more beneficiaries will demand care from that facility--and the increase in demand is likely to be proportionally greater than any decrease in the use of CHAMPUS, particularly for outpatient care. The reasons are threefold. First, a considerable amount of "ghost care" takes place outside the military health care system, by military beneficiaries who rely on private insurance or their own financial resources. Second, beneficiaries who visit physicians once or twice a year may not exceed the CHAMPUS deductible, and so will not file a claim. Finally, when outpatient care is free, as it is in the military, people use more of it. DoD health care planners use the so-called "trade-off factor" to illustrate this phenomenon. For active-duty dependents, the trade-off factor associated a reduction in one CHAMPUS visit with an increase of

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11. Vice Admiral Donald Custis (USN Retired), "Military Medicine From World War II to Vietnam," *Journal of the American Medical Association*, vol.264, no.17 (November 7, 1990).

1.8 military visits. For retirees and their dependents, a reduction in one CHAMPUS visit is associated with an increase of about 2.2 visits to military clinics. (The trade-off factor for hospital admissions is closer to 1 to 1.)

Luke's Use Manager

Luke Air Force Base is unique among the CAM sites because its medical commander created a position for an active-duty utilization manager (a registered nurse). The manager's immediate goal is to act not as a police officer but as an educator, someone who can give the military's physicians comparative feedback about their performance, and can begin exposing military physicians to the civilian world of managed care. He or she may be helped in this effort by the statutory obligation of military treatment facilities to collect funds from third-party payers. Many private health care insurers require precertification for admission, second opinions before surgery, and concurrent reviews; the military must follow these requirements to collect the maximum amounts. The Air Force hopes that in the long run the utilization manager will take over from the civilian peer review organizations, and subject military and civilian physicians to the same prospective criteria for hospital admissions.

Need for Improved Information Systems

If the CAM sites are to monitor physicians' practices and beneficiaries' use, they will need better data systems. Like all military installations, the CAM sites maintain the Medical Expense and Performance Reporting System (MEPRS), which involves periodically entering data on expenses, staffing, and work loads. Once entered, however, those data cannot easily be extracted for purposes of day-to-day management; local commanders receive MEPRS reports in hard copy several months after the data are first collected. Moreover, the MEPRS is also an inconvenient tool for keeping track of the costs of delivering care. Extensive manual computations are required to allocate the costs of a given bed-day or a visit to the various work centers (that is, a clinic, pharmacy, or laboratory). Also, it is impossible under the MEPRS to allocate costs to different "elements of resource," such as civilian pay, military pay, supplies, utilities, and contracts.

The services are just getting ready to field a modified version of MEPRS--updated to include a new expense assignment system known as EASE3--which will remedy these shortcomings. However, it may be several years before all military treatment facilities have the new system operating.

CHAPTER VI

PRELIMINARY EFFECTS ON COSTS

Civilian experience shows that managed care plans typically require two to three years to show success. It is thus too soon to judge whether the CAM demonstrations have led to lower health care costs. To put the issue of evaluation in context, consider the timetable experienced by DoD's other managed health care demonstration, the CHAMPUS Reform Initiative (CRI). In 1986, DoD outlined CRI's objectives and issued a Draft Request for Proposals; in 1987, DoD issued a Request for Proposals; in February 1988, DoD awarded a contract; in August 1988, CRI began in selected sites; in January 1990, the RAND Corporation provided preliminary results based on services provided during months 9 through 12 of CRI; in December 1990, the RAND Corporation provided more detailed results on use and costs based on services provided from April through September 1989. Thus, more than two years passed between the time CRI began and the time the RAND Corporation released a still-not-definitive evaluation. By that measure, detailed results on the Army's CAM demonstrations should not be expected until the end of this year.

Nonetheless, the Army's projects in Ft. Sill and Ft. Carson--which have been running for almost two years--offer some preliminary insights to the effects of Catchment Area Management. A comparison of the two sites suggests that the lack of one important initiative--restraints on utilization within military treatment facilities--could offset other efforts.

COSTS OF PROVIDING CARE IN FORTS SILL AND CARSON

Managed care should seek not only to reduce spending on CHAMPUS, but also to improve the cost-effectiveness of the combined CHAMPUS and direct military care systems. By this measure, Catchment Area Management has fared better in Ft. Carson than in Ft. Sill.

Between 1989 and 1990, spending on operation and maintenance (O&M) rose in both sites. Not counting the costs of base operations (that is, utilities) and depreciation on equipment, O&M expenses rose by about 13 percent in Ft. Carson and 19 percent in Ft. Sill. (These figures are based on data supplied by the Army Health Services Command. Alternate ways of

accounting for O&M yield different increases, but do not much alter the overall results--see Appendix Table A-1.) CHAMPUS spending, by contrast, diverged widely, with preliminary figures showing a 2 percent decline in Ft. Carson and a 25 percent increase in Ft. Sill.

The bottom line--the costs of delivering health care rose only 5 percent between 1989 and 1990 in Ft. Carson, well below the 9 percent general rate of increase in health care spending. In Ft. Sill, health care costs rose a hefty 22 percent (see Table 7).

THE EFFECT OF CHANGES IN WORK LOAD

What accounts for Ft. Carson's relative success over Ft. Sill? The patterns of outpatient visits and hospital admissions in the military treatment facilities suggest the following possibility: thanks to the CAM initiatives, use of outpatient care, and hence outpatient costs, rose in both sites. But only Ft. Carson was able to offset these costs by shifting hospital admissions from CHAMPUS to direct military care.

Changes in Direct Care Work Loads Between 1989 and 1990

During 1989, the first three-quarters of which preceded the CAM demonstration, the military treatment facilities in Forts Sill and Carson handled similar medical work loads. Although serving a considerably larger population than Ft. Sill, Ft. Carson only admitted 10 percent more hospital patients (9,965 versus Ft. Sill's 9,012) and treated only about 7 percent more outpatients (1,358 visits a day versus 1,264 visits a day in Ft. Sill). When compared with other Army facilities in the United States, both Ft. Carson and Ft. Sill appeared to have handled proportionally fewer retirees and their dependents. This lesser number probably reflects the relatively low proportion of nonactive-duty beneficiaries in the two sites. Whereas retirees and their dependents make up 42 percent of military beneficiaries living inside catchment areas, they account for only 36 percent of the beneficiaries living in Colorado Springs, and 29 percent of beneficiaries in Ft. Sill.

Change in Outpatient Visits. During 1990, numbers of outpatient visits by nonactive-duty beneficiaries (active-duty dependents and retirees and their dependents) increased in Ft. Sill by about 6 percent, and in Ft. Carson by about 23 percent. Although the number of visits rose for both types of nonactive-duty beneficiaries, retirees and their dependents experienced the largest proportional increase (see Table 8).

TABLE 7. COSTS OF PROVIDING HEALTH CARE IN 1989 AND 1990 IN THE ARMY'S CATCHMENT AREA MANAGEMENT SITES (In millions of dollars)

	1989	1990	Percentage Change
Operation and Maintenance[a]			
Ft. Carson	24.5	27.7	13
Ft. Sill	18.9	22.5	19
CHAMPUS			
Claims[b]			
Ft. Carson	28.1	23.8	-15
Ft. Sill	14.3	17.5[c]	22
CAM Expenses[d]			
Ft. Carson	1.9	5.5	189
Ft. Sill	1.1	1.7	55
Subtotal			
Ft. Carson	30.0	29.4	-2
Ft. Sill	15.4	19.2	5
Total Costs			
Ft. Carson	54.5	57.1	5
Ft. Sill	34.3	41.7	22

SOURCE: Congressional Budget Office

a. Based on data provided by the Army Health Services Command. These funds exclude the costs of base operations (for example, utilities) and depreciation on equipment.

b. Cost of reimbursements to health care providers, including partnership physicians, and costs paid to fiscal intermediaries for processing claims. Because beneficiaries may file CHAMPUS claims up to 24 months after they receive care, current CHAMPUS data are less than 100 percent complete (generally 88 percent to 92 percent). These figures are adjusted up to reflect a full year's data.

c. Because of problems in processing and recording claims, current CHAMPUS data for Ft. Sill are more incomplete than usual. Though this figure is adjusted up to reflect a full years' data, it may still be too low.

d. CHAMPUS funds that were reprogrammed to support various CAM initiatives.

TABLE 8. PERCENTAGE CHANGE IN DIRECT CARE WORK LOADS IN ARMY CATCHMENT AREA MANAGEMENT SITES, 1989 TO 1990

	Active Duty	Active Dependent	Retiree and Dependent	Total Retiree or Dependent	Other[a]	Total
Population						
Ft. Sill	-0.6	-2.2	-0.8	-1.6	n.a.	-1.3
Ft. Carson[b]	-10.4	-3.2	4.7	0.1	n.a.	-2.5
Other Army[c]	2.1	0.7	1.3	1.0	n.a.	1.3
Hospital Admissions						
Ft. Sill	3.6	-4.0	-5.8	-4.6	27.3[d]	0.4
Ft. Carson[e]	-18.4	25.0	39.6	28.9	0.0	13.2
Other Army[c]	6.3	0.6	-6.8	-2.7	-10.3	-0.8
Outpatient Visits						
Ft. Sill	7.0	1.9	12.6	5.9	36.6[d]	8.5
Ft. Carson[e]	-8.7	18.4	33.4	23.4	-3.9	7.5
Other Army[c]	-0.5	-3.8	-5.1	-4.4	-3.5	-2.9

SOURCE: Congressional Budget Office.

NOTE: n.a. = not available.

a. Includes National Guard and Reserve personnel; members of the Coast Guard, Public Health Service, and National Oceanic and Atmospheric Administration and their dependents; foreign military personnel and their dependents; and selected federal civilians.

b. Includes military beneficiaries living in the Colorado Springs medical service area who DoD health care planners specifically assign to the Ft. Carson catchment area; the rules assign beneficiaries to the closest hospital of the same service branch as their sponsor, but if another service's hospital is more than 10 miles closer, the rules assign beneficiaries to the closest hospital.

c. Includes other Army catchment areas in the continental United States, Alaska, Hawaii, and Panama that are under the authority of the Army Health Services Command.

d. The increase results entirely from an increase in the use of services by Reserve and National Guard personnel receiving training at Ft. Sill.

e. Includes work load in Evans Army Hospital but not in the Air Force Academy Hospital.

That this experience ran counter to the trend in other Army catchment areas--where outpatient visits by nonactive-duty beneficiaries declined by 4 percent--suggests the influence of Catchment Area Management, in particular the effect of partnership physicians. (Changes in population were too modest to have accounted for these differences: between 1989 and 1990, the population of nonactive-duty Army beneficiaries declined 1.6 percent in Ft. Sill, held steady in Ft. Carson, and increased 1 percent in other Army catchment areas.)

Why did nonactive-duty visits in Ft. Carson increase more than three times as fast as in Ft. Sill? The disparity may stem from differences in visits by active-duty personnel between the two sites. Between 1989 and 1990, visits by active-duty personnel dropped by about 9 percent in Ft. Carson, evidently because one of Ft. Carson's active-duty brigades was deactivated early in 1990 (hence the 10 percent reduction in active-duty personnel shown in Table 8). The decrease in active-duty work load made it possible for Ft. Carson to treat increased numbers of nonactive-duty beneficiaries.

By contrast, Ft. Sill's military treatment facility handled 7 percent more active-duty visits in 1990 than in 1989. Since neither the active-duty population nor the number of military physicians changed much between 1989 and 1990, the increase was most likely the result of policy changes instituted by Ft. Sill's new hospital commander, who arrived in the summer of 1989. In an effort to boost productivity, he began monitoring the performance of individual physicians, and they responded by cutting down waiting times and seeing more active-duty patients. It is impossible to say whether the increase was appropriate. On the one hand, the rise in physicians' productivity might have met health care needs that may have previously gone untreated. On the other hand, that rise might have included a large number of discretionary visits. Whichever it is, had Ft. Sill's physicians not handled increased numbers of active-duty visits, they could have supplied more outpatient care to dependents and retirees.

Operation Desert Shield, which spanned the last two months of fiscal year 1990, may also have contributed to the increase in Ft. Sill's active-duty visits. Before deploying to the Persian Gulf, active-duty and activated reserve personnel required extensive physical exams to ensure their fitness to serve. If more troops had been deployed from Ft. Sill than from Ft. Carson, Ft. Sill's physicians would have had their hands full taking care of uniformed personnel.

But increases in outpatient care will not necessarily save money. DoD's trade-off factor would suggest that the increases in Ft. Sill's and Ft. Carson's nonactive-duty outpatient visits were probably not balanced by 1-to-1 decreases in CHAMPUS work load (detailed data on CHAMPUS use are not yet available). Had access to military clinics not been improved, many of the visits handled in those facilities would not have appeared under CHAMPUS.

Instead of curbing costs, the rise in outpatient visits between 1989 and 1990 may have pushed Ft. Sill's and Ft. Carson's costs in the other direction. One can only wonder whether a program of managing use inside military treatment facilities would have contained the increase.

Change in Hospital Admissions. Although Ft. Sill's outpatient visits rose markedly between 1989 and 1990, its hospital admissions followed a pattern like that of other Army catchment areas. Admissions of nonactive-duty beneficiaries declined modestly, while admissions of active-duty personnel showed a moderate increase. (That rise may have been linked to the increase in outpatient visits. With increased use of outpatient services, perhaps physicians more frequently saw illnesses that lead to hospitalization.)[1] The decline in admissions of active-duty dependents was probably amplified by Operation Desert Shield. As active-duty personnel prepared to be deployed, many of their dependents temporarily left Ft. Sill to spend the duration with family.

Ft. Carson, by contrast, enjoyed a parallel rise in hospital admissions. Unlike Ft. Sill, Ft. Carson made the "recapture" of CHAMPUS admissions, particularly women giving birth, a top priority. And by targeting CHAMPUS users for enrollment, Ft. Carson may have eased the challenge of shifting beneficiaries. Perhaps as a result, admissions of dependents of active-duty personnel rose 25 percent, and admissions of retired military personnel and their dependents almost 40 percent. Women delivering babies accounted for about one-quarter of the overall increase in admissions. As for active-duty personnel, their admissions declined by 18 percent, which itself may have enhanced Ft. Carson's ability to care for nonactive-duty inpatients.

Hospital admissions for medical or surgical treatments--and certainly for deliveries--are more likely than outpatient visits to reflect a trade-off factor of 1-to-1.[2] Moreover, by targeting CHAMPUS users for enrollment, Ft. Carson may have reduced the risk of shifting "ghost care" to the military. Therefore, one could conclude that many of Ft. Carson's new nonactive-duty admissions were recaptured from CHAMPUS. So long as the incremental cost of caring for new admissions in existing military facilities is less than the average cost of paying for civilian care under CHAMPUS, recapturing work load will save the government money. Ft. Carson therefore relied on an improved inpatient capacity to counter the effects of increased outpatient visits.

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1. This effect has been mirrored in civilian health care plans that raised financial barriers to outpatient care. Members of such plans not only visited physicians less often than members of more generous plans, but they were less frequently hospitalized. See Joseph Newhouse and others, *Some Interim Results from a Controlled Trial of Cost-Sharing in Health Insurance* (Santa Monica: RAND Corporation, January 1982).

2. Lewin/ICF, *Initial Report on the Cost-Effectiveness of the Partnership Program* (Washington: Lewin/ICF, September 8, 1989), p. 4-2.

In addition, Ft. Carson may have had other advantages over Ft. Sill. As part of a medically affluent area, it should have been in a better position than Ft. Sill (a medically isolated area) to drive hard bargains with local physicians. Further, the ratio of actual local charges to prevailing CHAMPUS charges is apt to be higher in Colorado Springs than in Lawton, Oklahoma. And although neither site really managed the use of civilian providers, Ft. Carson may have serendipitously realized a more cost-effective network, because its preferred providers were already part of a corporate network. Perhaps such physicians were predisposed, in a way that Ft. Sill's physicians were not, to an economical style of practicing medicine.

BROADER ISSUE OF PER CAPITA COSTS

In large part, Ft. Carson seems to have held costs down by shifting hospital patients to the military hospital. But was Ft. Carson right to recapture as many CHAMPUS admissions as possible, given that a portion of those admissions may be inappropriate? DoD may save money when it hospitalizes someone in a military hospital rather than in a civilian hospital under CHAMPUS. But how much more might Ft. Carson have saved if, because of a rigorous program of reviewing use, that patient was not hospitalized to begin with?

Per capita use of hospital services is possibly higher in Ft. Carson than in Ft. Sill. Some civilian research suggests that when communities have more beds available, their physicians tend to admit more patients whose conditions might or might not justify hospitalization.[3] Moreover, the higher the ratio of surgeons to population, the greater the likelihood of unnecessary surgeries. On both counts, Ft. Carson ranks above Ft. Sill. Short-term care civilian hospitals in Ft. Sill's catchment area run about 298 beds for every 100,000 people; in Ft. Carson's catchment area, they run 340 beds for every 100,000 people, a difference of 14 percent. And Ft. Carson has 64 percent more primary care physicians per capita (41 versus 25) and 121 percent more surgical specialists (31 versus 14) than Ft. Sill. Beneficiaries living in Ft. Carson may therefore be more likely than beneficiaries living in Ft. Sill to be referred to a civilian hospital.

At the moment, however, this is conjecture. Only when detailed data become available on enrollees--their socioeconomic and demographic characteristics, and their use of health care services--will it be possible to estimate a cost per capita that is comparable across catchment areas. Then it will be possible to judge Catchment Area Management's ability to control the use of health care services. Indeed, only by controlling beneficiaries'

3. John Wennberg, "Population Illness Rates do not Explain Population Hospitalization Rates," *Medical Care*, vol. 25, no. 4 (April 1987).

overall use of health care services--inside military treatment facilities as well as under CHAMPUS--can the military services hope to make major gains in containing costs.

APPENDIX

This appendix shows how alternate ways of accounting for operation and maintenance costs affect the overall costs of delivering health care in Forts Sill and Carson.

TABLE A-1. COSTS OF PROVIDING HEALTH CARE IN 1989 AND 1990 IN THE ARMY'S CATCHMENT AREA MANAGEMENT SITES UNDER DIFFERENT WAYS OF ACCOUNTING FOR OPERATION AND MAINTENANCE
(In millions of dollars)

	1989	1990	Percentage Change
Operation and Maintenance[a]			
HSC Data[b]			
Ft. Carson	24.5	27.7	13
Ft. Sill	18.9	22.5	19
MTF Data[c]			
Ft. Carson	27.6	30.6	11
Ft. Sill	21.4	25.2	18
MEPRS Data[d]			
Basic			
Ft. Carson	24.4	28.3	16
Ft. Sill	19.2	22.2	16
Adjusted[e]			
Ft. Carson	28.6	30.2	6
Ft. Sill	22.6	25.8	14
CHAMPUS			
Claims[f]			
Ft. Carson	28.1	23.8	-15
Ft. Sill	14.3	17.5[g]	22
CAM Expenses[h]			
Ft. Carson	1.9	5.5	189
Ft. Sill	1.1	1.7	55
Subtotal			
Ft. Carson	30.0	29.4	-2
Ft. Sill	15.4	19.2	25

(Continued)

SOURCE: Congressional Budget Office.

a. Funds for O&M exclude the costs of base operations (for example, utilities) and depreciation on equipment, unless otherwise noted.

TABLE A-1. Continued

	1989	1990	Percentage Change
	Total Costs		
Based on HSC			
Ft. Carson	54.5	57.1	5
Ft. Sill	34.3	41.7	22
Based on MTF Data			
Ft. Carson	57.6	59.9	4
Ft. Sill	36.8	44.4	1
Based on MEPRS			
Basic			
Ft. Carson	54.4	57.7	6
Ft. Sill	34.6	41.5	20
Adjusted			
Ft. Carson	59.3	60.5	2
Ft. Sill	38.1	45.0	18

NOTES: (Continued)

b. Data provided by the Army Health Services Command.

c. Based on data provided by the individual Military Treatment Facilities.

d. Based on data extracted from the Medical Expense and Performance Reporting System (MEPRS).

e. Adjusted to include the costs of base operations (for example, utilities) and depreciation on equipment.

f. Cost of reimbursements to health care providers, including partnership physicians, and costs paid to fiscal intermediaries for processing claims. Because beneficiaries may file CHAMPUS claims up to 24 months after they receive care, current CHAMPUS data are less than 100 percent complete (generally 88 percent to 92 percent). These figures are adjusted up to reflect a full year's data.

g. Because of problems in processing and recording claims, current CHAMPUS data for Ft. Sill are more incomplete than usual. Though this figure is adjusted up to reflect a full years' data, it may still be too low.

h. CHAMPUS funds that were reprogrammed to support various CAM initiatives.